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# **CARLYLE LAKE**

**KASKASKIA RIVER  
CLINTON COUNTY, ILLINOIS**

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**SPECIFICATIONS FOR**

## **HIGH WATER BOAT RAMP AND ROAD AT DAM WEST ACCESS AREA**

**SOLICITATION NO. DACW43-99-B-0205**

**THIS SOLICITATION IS 100% SMALL BUSINESS SET-ASIDE**



**US Army Corps  
of Engineers  
St. Louis District**

**Gateway to Excellence**

**NOVEMBER 1998**

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## DESIGN AUTHENTICATION

This project was designed by the St. Louis District, U.S. Army Corps of Engineers. The initials or signatures and registration designations of individuals appear on these project documents within the scope of their employment as required by ER 1110-1-8152.

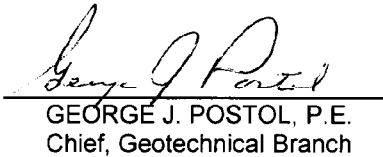
HIGH WATER BOAT RAMP AND ROAD AND ROAD AT DAM WEST ACCESS AREA, CARLYLE LAKE, KASKASKIA RIVER, CLINTON COUNTY, ILLINOIS



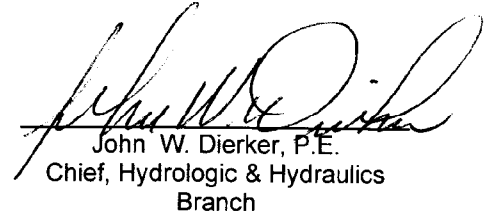
MELVIN W. BALDUS, P.E.  
Chief, Engineering Division



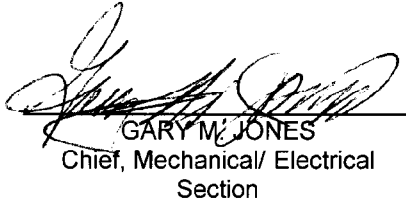
BOBBY R. HUGHEY, P.E.  
Chief, Design Branch



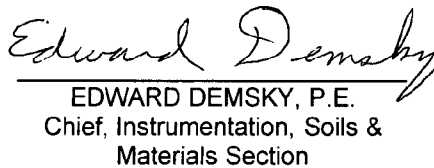
GEORGE J. POSTOL, P.E.  
Chief, Geotechnical Branch



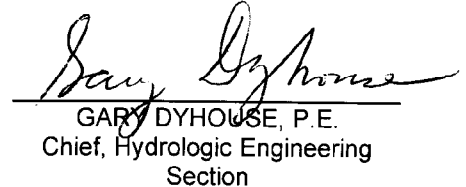
John W. Dierker, P.E.  
Chief, Hydrologic & Hydraulics  
Branch



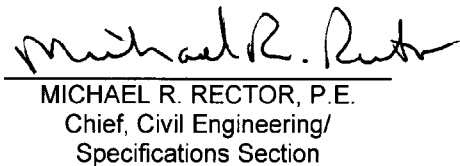
GARY M. JONES  
Chief, Mechanical/ Electrical  
Section




EDWARD DEMSKY, P.E.  
Chief, Instrumentation, Soils &  
Materials Section



GARY DYHOUSE, P.E.  
Chief, Hydrologic Engineering  
Section



MICHAEL R. RECTOR, P.E.  
Chief, Civil Engineering/  
Specifications Section



JOSEPH L. SCHWENK, P.E.  
Chief, Foundations Section

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<b>SOLICITATION, OFFER, AND AWARD</b> <i>(Construction, Alteration, or Repair)</i>	1. SOLICITATION NUMBER  DACW43-99-B-0205	2. TYPE OF SOLICITATION  <input checked="" type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)	3. DATE ISSUED  11/30/98	PAGE OF PAGES  1      2
	<b>IMPORTANT - The "offer" section on the reverse must be fully completed by the offeror.</b>			
4. CONTRACT NUMBER	5. REQUISITION/PURCHASE REQUEST NUMBER W81C8X-8295-1376	6. PROJECT NUMBER		
7. ISSUED BY CONTRACTING DIVISION USARMY ENGR DIST ST LOUIS 1222 SPRUCE STREET RM 4.207 ST LOUIS MO 63103-2833	CODE B3P0000	8. ADDRESS OFFER TO SAME AS ITEM 7  BID OPENING ROOM: 4.203  HAND CARRIED BIDS WILL BE RECEIVED ON THE FOURTH FLOOR, IN ROOM 4.203 UNTIL 11:00 A.M. LOCAL TIME		
9. FOR INFORMATION CALL 	A. NAME JOAN C. BRICKEY	B. TELEPHONE NUMBER (Include area code) (NO COLLECT CALLS) 314-331-8521		

**SOLICITATION**

**NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".**

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS (Title, identifying number, date):

THE WORK CONSISTS OF CONSTRUCTION OF A HIGH WATER BOAT RAMP, ROAD, LIFT STATION AND SEWER AND PARKING LOT LIGHT RELOCATIONS. THE WORK INCLUDES SITE WORK WITH CLEARING, GRADING, EXCAVATION, AND BACKFILL. THE LIFT STATION WILL CONSIST OF SUBMERSIBLE PUMPS, AUTOMATIC CONTROL EQUIPMENT, PIPING, VALVES AND HOISTING GUIDES.

THE COST RANGE IS BETWEEN \$250,000 AND \$500,000.

11. The Contractor shall begin performance within 15 calendar days and complete it within 120 calendar days after receiving  
☐ award, ☒ notice to proceed. This performance period is ☒ mandatory, ☐ negotiable. (See SECTION 00800-1, PARA.1 .)

12A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE PAYMENT BONDS?  
 (If "YES," indicate within how many calendar days after award in Item 12B.)

☒ YES ☐ NO

12B. CALENDAR DAYS

10

13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 0 copies to perform the work required are due at the place specified in Item 8 by 11:00 A.M. (hour) local time 1/04/99 (date). If this is a sealed bid solicitation, offers will be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.

B. An offer guarantee ☒ is, ☐ is not required.

C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.

D. Offers providing less than 60 calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

**OFFER (Must be fully completed by offeror)**

14. NAME AND ADDRESS OF OFFEROR (Include ZIP Code)

15. TELEPHONE NUMBER (Include area code)

16. REMITTANCE ADDRESS (Include only if different than Item 14)

DUNS NO. \_\_\_\_\_ CAGE CODE \_\_\_\_\_

CODE

FACILITY CODE

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within \_\_\_\_\_ calendar days after the date offers are due. (Insert any number equal or greater than the minimum requirement stated in 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)

AMOUNTS



18. The offeror agrees to furnish any required performance and payment bonds.

**19. ACKNOWLEDGEMENT OF AMENDMENTS**

(The offeror acknowledges receipt of amendments to the solicitation - give number and date of each)

AMENDMENT NO.

DATE

20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)

20B. SIGNATURE

20C. OFFER DATE

**AWARD (To be completed by Government)**

21. ITEMS ACCEPTED

22. AMOUNT

23. ACCOUNTING AND APPROPRIATION DATA

96NA X 3123.0000 B3 7 08 2413 002700 96233 3200 0024GX

24. SUBMIT INVOICES TO ADDRESS SHOWN IN  
(4 copies unless otherwise specified)

ITEM

BLK 26

25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO

☐ 10 U.S.C. 2304(c) ( ) ☐ 41 U.S.C. 253(c) ( )

26. ADMINISTERED BY

CODE

B3M0C30

USARMY ENGR. DIST. ST. LOUIS  
CENTRAL AREA OFFICE  
301 RIVERLANDS WAY  
WEST ALTON, MO 63386

27. PAYMENT WILL BE MADE BY

USACE FINANCE CENTER  
ATTN: CEFC-AO-P  
5720 INTEGRITY DRIVE  
MILLINGTON TN 38054-5005

**CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE**

28. NEGOTIATED AGREEMENT (Contractor is required to sign this document and return \_\_\_\_\_ copies to the issuing office.) Contractor agrees to furnish and deliver all items or perform all work requirements identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications incorporated by reference in or attached to this contract.



29. AWARD. (Contractor is not required to sign this document.) Your offer on this solicitation is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.

30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN  
(Type or print)

31A. NAME OF CONTRACTING OFFICER (Type or print)

30B. SIGNATURE

30C. DATE

31B. UNITED STATES OF AMERICA

31C. AWARD DATE

BY



SECTION 00010  
SUPPLIES OR SERVICES AND PRICES/COSTS

ITEM	DESCRIPTION	QUANTITY	U/I	UNIT PRICE	AMOUNT
0001	Clearing, Grubbing and Stripping	1.00	SJ	_____	_____
0002	Storm Sewer	1.00	SJ	_____	_____
0003	Earthwork	1.00	SJ	_____	_____
0004	Riprap	700.00	TN	_____	_____
0005	Bedding	350.00	TN	_____	_____
0006	Crushed Stone	1200.00	TN	_____	_____
0007	Asphaltic Concrete	500.00	TN	_____	_____
0008	Miscellaneous Items (Pavement Markings, Gate and Guardrail)	1.00	SJ	_____	_____
0009	Lift Station	1.00	SJ	_____	_____
0010	Gravity Sewer Line, 8-Inch	956.00	LF	_____	_____
0011	Manholes	1.00	SJ	_____	_____
0012	Pressure Sewer, 2-Inch	660.00	LF	_____	_____

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0013	Establishment of Turf	1.00	SJ	_____	_____
0014	Concrete Boat Ramp	1.00	SJ	_____	_____
0015	Electrical Work	1.00	SJ	_____	_____

TOTAL \$ \_\_\_\_\_

#### ABBREVIATIONS

SJ Sum Job  
 EA Each  
 LF Linear Feet  
 TN Ton  
 CD Cubic Yards

#### BIDDING SCHEDULE NOTES

1. All quantities shown on the BIDDING SCHEDULE are estimated quantities except when the unit is shown as "job".
2. When bids are solicited on a unit price basis, bidders shall insert in the spaces provided therefor in the SCHEDULE both the "unit price" and the "estimated amount" resulting from applying the said unit price to the estimated quantity shown. In event the bidder quotes only a total price ("estimated amount") in its bid and fails to quote the unit price, the Government will determine such unit price by dividing the total price quoted by the quantity of the item set out in the SCHEDULE. The bidder agrees that the unit price so determined shall be used for the purpose of bid evaluation, award and all payments to the Contractor including final payment.
3. All extensions of the unit prices shown will be subject to verifications by the Government. In case of variation between the unit price and the extension, the unit price will be considered to be the bid and the extension will be corrected accordingly.
4. If a modification to a bid based on unit prices is submitted, which provides for a lump sum adjustment to the total estimated cost, the application of the lump sum adjustment to each unit price in the bid schedule must be stated. If it is not stated, the bidder agrees that the lump sum adjustment shall be applied on a pro rata basis to every unit price in the bid schedule.
5. Bidders are required to bid on all items listed on the Bidding Schedule in addition to inserting a total quoted bid in the appropriate space provided. Failure to do so will be considered good cause to disqualify the bid.

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NOTICES

1. SOLICITATION DEFINITIONS ARE PRESCRIBED IN FAR 52.214.1.
2. BIDDERS MUST PROVIDE FULL, ACCURATE, AND COMPLETE INFORMATION AS REQUIRED BY THIS SOLICITATION AND ITS ATTACHMENTS. THE PENALTY FOR MAKING FALSE STATEMENTS IN BIDS IS PRESCRIBED IN 18 USC 1001. (FAR 52.214-4)
3. NOTE THE AFFIRMATIVE ACTION REQUIREMENT OF THE EQUAL OPPORTUNITY CLAUSE WHICH MAY APPLY TO THE CONTRACT RESULTING FROM THIS SOLICITATION.

END OF SECTION 00010

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SECTION 00100

INSTRUCTIONS, CONDITIONS, AND NOTICES TO BIDDERS

1 NOT USED

2 NOT USED

3 52.204-6 DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER (APR 1998)

(a) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" followed by the DUNS number which identifies the offeror's name and address exactly as stated in the offer. The DUNS number is a nine-digit number assigned by Dun and Bradstreet Information Services.

(b) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one. A DUNS number will be provided immediately by telephone at no charge to the offeror. For information on obtaining a DUNS number, the offeror, if located within the United States, should call Dun and Bradstreet at 1-800-333-0505. The offeror should be prepared to provide the following information:

- (1) Company name.
- (2) Company address.
- (3) Company telephone number.
- (4) Line of business.
- (5) Chief executive officer/key manager.
- (6) Date the company was started.
- (7) Number of people employed by the company.
- (8) Company affiliation.

(c) Offerors located outside the United States may obtain the location and phone number of the local Dun and Bradstreet Information Services office from the Internet home page at <http://www.dnb.com/>. If an offeror is unable to locate a local service center, it may send an e-mail to Dun and Bradstreet at [globalinfo@mail.dnb.com](mailto:globalinfo@mail.dnb.com).

(End of provision)

4 52.211-2 AVAILABILITY OF SPECIFICATIONS LISTED IN THE DOD INDEX OF SPECIFICATION AND STANDARDS (DODISS) AND DESCRIPTIONS LISTED IN THE ACQUISITION MANAGEMENT SYSTEMS AND DATA REQUIREMENTS CONTROL LIST, DOD 5010.12(AUG 1998)

(a) Copies of specifications, standards, and data item descriptions cited in this solicitation may be obtained for a fee by submitting a request to the--Department of Defense Single Stock Point (DoDSSP), Building 4, Section D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Telephone (215) 697-2667/2179, Facsimile (215) 697-1462.

(b) Order forms, pricing information, and customer support information may be obtained--

- (1) By telephone at (215) 697-2667/2179; or
  - (2) Through the DoDSSP Internet site at <http://www.dodssp.daps.mil>.
- (End of provision)

5 52.214-1 SOLICITATION DEFINITIONS--SEALED BIDDING (JUL 1987)

"Government" means United States Government.

"Offer" means "bid" in sealed bidding.

"Solicitation" means an invitation for bids in sealed bidding.

(End of provision)

6 52.214-3 AMENDMENTS TO INVITATIONS FOR BIDS (DEC 1989)

(a) If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.

(b) Bidders shall acknowledge receipt of any amendment to this solicitation (1) by signing and returning the amendment, (2) by identifying the amendment number and date in the space provided for this purpose on the form for submitting a bid, (3) by letter or telegram, or (4) by facsimile, if facsimile bids are authorized in the solicitation. The Government must receive the acknowledgment by the time and at the place specified for receipt of bids.

(End of provision)

7 52.214-4 FALSE STATEMENTS IN BIDS (APR 1984)

Bidders must provide full, accurate, and complete information as required by this solicitation and its attachments. The penalty for making false statements in bids is prescribed in 18 U.S.C. 1001.

(End of provision)

(R 2-201(b)(xiii))

(R 1-2.201(a)(11))

8 52.214-5 SUBMISSION OF BIDS (MAR 1997)

(a) Bids and bid modifications shall be submitted in sealed envelopes or packages (unless submitted by electronic means) (1) addressed to the office specified in the solicitation, and (2) showing the time and date specified for receipt, the solicitation number, and the name and address of the bidder.

(b) Bidders using commercial carrier services shall ensure that the bid is addressed and marked on the outermost envelope or wrapper as prescribed in subparagraphs (a) (1) and (2) of this provision when delivered to the office specified in the solicitation.

(c) Telegraphic bids will not be considered unless authorized by the solicitation; however, bids may be modified or withdrawn by written or telegraphic notice.

(d) Facsimile bids, modifications, or withdrawals, will not be considered unless authorized by the solicitation.

(e) Bids submitted by electronic commerce shall be considered only if the electronic commerce method was specifically stipulated or permitted by the solicitation.

(End of provision)

9 52.214-6 EXPLANATION TO PROSPECTIVE BIDDERS (APR 1984)

Any prospective bidder desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must request it in writing soon enough to allow a reply to reach all prospective bidders before the submission of their bids. Oral explanations or instructions given before the award of a contract will not be binding. Any information given a prospective bidder concerning a solicitation will be furnished promptly to all other prospective bidders as an amendment to the solicitation, if that

information is necessary in submitting bids or if the lack of it would be prejudicial to other prospective bidders.

(End of provision)

(R SF 33A, Para 3, 1978 JAN)

10      52.214-7      LATE SUBMISSIONS, MODIFICATIONS, AND WITHDRAWALS OF BIDS (MAY 1997)

(a) Any bid received at the office designated in the solicitation after the exact time specified for receipt will not be considered unless it is received before award is made and it--

(1) Was sent by registered or certified mail not later than the fifth calendar day before the date specified for receipt of bids (e.g., a bid submitted in response to a solicitation requiring receipt of bids by the 20th of the month must have been mailed by the 15th);

(2) Was sent by mail (or telegram or facsimile, if authorized) or hand-carried (including delivery by a commercial carrier) if it is determined by the Government that the late receipt was due primarily to Government mishandling after receipt at the Government installation;

(3) Was sent by U.S. Postal Service Express Mail Next Day Service-Post Office To Addressee, not later than 5:00 P.M. at the place of mailing two working days prior to the date specified for receipt of bids. The term "working days" excludes weekends and U.S. Federal holidays; or

(4) Was transmitted through an electronic commerce method authorized by the solicitation and was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of bids.

(b) Any modification or withdrawal of a bid is subject to the same conditions as in paragraph (a) of this provision.

(c) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent either by registered or certified mail is the U.S. or Canadian Postal Service postmark both on the envelope or wrapper and on the original receipt from the U.S. or Canadian Postal Service. Both postmarks must show a legible date or the bid, modification, or withdrawal shall be processed as if mailed late. "Postmark" means a printed, stamped, or otherwise placed impression (exclusive of a postage meter machine impression) that is readily identifiable without further action as having been supplied and affixed by employees of the U.S. or Canadian Postal Service on the date of mailing. Therefore, bidders should request the postal clerk to place a legible hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper.

(d) The only acceptable evidence to establish the time of receipt at the Government installation is the time/date stamp of that installation on the bid wrapper or other documentary evidence of receipt maintained by the installation.

(e) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent by U.S. Postal Service Express Mail Next Day Service-Post Office to Addressee is the date entered by the post office receiving clerk on the "Express Mail Next Day Service-Post Office to Addressee" label and the postmark on the envelope or wrapper and on the original receipt from the U.S. Postal Service. "Postmark" has the same meaning as defined in paragraph (c) of this provision, excluding postmarks of the Canadian Postal Service. Therefore, bidders should request the postal clerk to place a legible hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper.

(f) Notwithstanding paragraph (a) of this provision, a late modification of an otherwise successful bid that makes its terms more favorable to the Government will be considered at any time it is received and may be

accepted.

(g) Bids may be withdrawn by written notice or telegram (including mailgram) received at any time before the exact time set for receipt of bids. If the solicitation authorizes facsimile bids, bids may be withdrawn via facsimile received at any time before the exact time set for receipt of bids, subject to the conditions specified in the provision entitled "Facsimile Bids." A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for receipt of bids, the identity of the person requesting withdrawal is established and the person signs a receipt for the bid.

(h) If an emergency or unanticipated event interrupts normal Government processes so as to cause postponement of the scheduled bid opening, and urgent Government requirements preclude amendment of the solicitation or other notice of an extension of the opening date, the time specified for receipt of bids will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(End of provision)

11 52.214-17 AFFILIATED BIDDERS (APR 1984)

(a) Business concerns are affiliates of each other when, either directly or indirectly, (1) one concern controls or has the power to control the other, or (2) a third party controls or has the power to control both.

(b) Each bidder shall submit with its bid an affidavit stating that it has no affiliates, or containing the following information:

(1) The names and addresses of all affiliates of the bidder.

(2) The names and addresses of all persons and concerns exercising control or ownership of the bidder and any or all of its affiliates, and whether they exercise such control or ownership as common officers, directors, stockholders holding controlling interest, or otherwise.

(End of provision)

(R 7-2003.12 1974 APR)

12 52.214-18 PREPARATION OF BIDS--CONSTRUCTION (APR 1984)

(a) Bids must be (1) submitted on the forms furnished by the Government or on copies of those forms, and (2) manually signed. The person signing a bid must initial each erasure or change appearing on any bid form.

(b) The bid form may require bidders to submit bid prices for one or more items on various bases, including--

(1) Lump sum bidding;

(2) Alternate prices;

(3) Units of construction; or

(4) Any combination of subparagraphs (1) through (3) above.

(c) If the solicitation requires bidding on all items, failure to do so will disqualify the bid. If bidding on all items is not required, bidders should insert the words "no bid" in the space provided for any item on which no price is submitted.

(d) Alternate bids will not be considered unless this solicitation authorizes their submission.

(End of provision)

(R SF 22, Para 5, 1978 FEB)

13 52.214-19 CONTRACT AWARD--SEALED BIDDING--CONSTRUCTION (AUG 1996)

(a) The Government will evaluate bids in response to this solicitation

without discussions and will award a contract to the responsible bidder whose bid, conforming to the solicitation, will be most advantageous to the Government, considering only price and the price-related factors specified elsewhere in the solicitation.

(b) The Government may reject any or all bids, and waive informalities or minor irregularities in bids received.

(c) The Government may accept any item or combination of items, unless doing so is precluded by a restrictive limitation in the solicitation or the bid.

(d) The Government may reject a bid as nonresponsive if the prices bid are materially unbalanced between line items or subline items. A bid is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the bid will result in the lowest overall cost to the Government even though it may be the low evaluated bid, or if it is so unbalanced as to be tantamount to allowing an advance payment.

(End of provision)

14      52.216-1              TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a firm fixed-price construction contract resulting from this solicitation.

(End of provision)

15      52.225-12            NOTICE OF BUY AMERICAN ACT REQUIREMENT-CONSTRUCTION MATERIALS  
(MAY 1997)

(a) Offerors are required to comply with the requirements of Federal Acquisition Regulation (FAR) clause 52.225-5, Buy American Act Construction Materials, of this solicitation. The terms "construction material" and "domestic construction material," as used in this provision, have the meanings set forth in FAR clause 52.225-5.

(b) Offerors should request a determination regarding the inapplicability of the Buy American Act in time to allow determination before submission of offers. For evaluation of a request for a determination regarding the inapplicability of the requirements of the Buy American Act prior to the time set for receipt of offers, the information and applicable supporting data required by paragraphs (c) and (d) of FAR clause 52.225-5 shall be included in the request. If an offeror has not requested a determination regarding the inapplicability of the Buy American Act prior to submission of its offer, or has not received a response to a request made prior to submission of its offer, the information and supporting data shall be included in the offer.

(c) Evaluation of offers.

(1) For evaluation of offers, (unless agency regulations specify a higher percentage) the Government will add to the offered price 6 percent of the cost of any foreign construction material proposed for exception from the requirements of the Buy American Act based on claimed unreasonable cost of domestic construction materials in accordance with paragraph (b)(3)(i) of FAR clause 52.225-5.

(2) If the evaluation of offers results in a tie between an offer including such foreign construction material excepted on the basis of unreasonable cost, as evaluated, and an offer including solely domestic construction material or other foreign construction material listed in the solicitation at paragraph (b)(2) of FAR clause 52.225-5, or subsequently excepted in accordance with paragraphs (b)(3) (ii) or (iii) of FAR clause 52.225-5, award shall be made to the offeror that submitted

the latter offer.

(d) Alternate offers.

(1) When an offer includes foreign construction material not listed by the Government in the solicitation at paragraph (b)(2) of FAR clause 52.225-5, offerors also may submit alternate offers based on use of equivalent domestic construction material.

(2) If alternate offers are submitted, a separate Standard Form 1442 shall be submitted for each alternate offer, and a separate price comparison table, prepared in accordance with paragraphs (c) and (d) of FAR clause 52.225-5, shall be submitted for each offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception to apply.

(3) If the Government determines that a particular exception requested under paragraph (c) of FAR clause 52.225-5 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic construction material, and the offeror shall be required to furnish such domestic construction material.

(i) In sealed bid procurements, any offer based on use of that particular foreign construction material shall be rejected as nonresponsive.

(ii) In negotiated procurements, any offer based on use of that particular foreign construction material may not be accepted unless revised during negotiations.

(End of provision)

16      52.233-2              SERVICE OF PROTEST (AUG 1996)

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from

Contracting Officer

U. S. Army Engineer District, St. Louis

1222 Spruce Street, Room 4.207

St. Louis, Missouri 63101-2833

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(End of provision)

17      52.236-27 I              SITE VISIT (CONSTRUCTION) (FEB 1995)--ALTERNATE I (FEB 1995)

(a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged and expected to inspect the site where the work will be performed.

(b) An organized site visit has been scheduled for- December 8, 1998 at 10:00 a.m.

(c) Participants will meet at- Carlyle Lake Visitor Center

(End of provision)

18      52.204-7001              COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING (DEC 1991)

(a) The Offeror is requested to enter its CAGE code on its offer in the

block with its name and address. The CAGE code entered must be for that name and address. Enter CAGE before the number.

(b) If the Offeror does not have a CAGE code, it may ask the Contracting Officer to request one from the Defense Logistics Services Center (DLSC). The Contracting Officer will--

- (1) Ask the Contractor to complete section B of a DD Form 2051, Request for Assignment of a Commercial and Government Entity (CAGE) Code;
  - (2) Complete section A and forward the form to DLSC; and
  - (3) Notify the Contractor of its assigned CAGE code.
- (c) Do not delay submission of the offer pending receipt of a CAGE code.  
(End of provision)

19 52.204-7004 REQUIRED CENTRAL CONTRACTOR REGISTRATION (MAR 1998)

(a) Definitions. As used in this clause--

(1) "Central Contractor Registration (CCR) database" means the primary DoD repository for contractor information required for the conduct of business with DoD.

(2) "Data Universal Numbering System (DUNS) number" means the 9-digit number assigned by Dun and Bradstreet Information Services to identify unique business entities.

(3) "Data Universal Numbering System +4 (DUNS+4) number" means the DUNS number assigned by Dun and Bradstreet plus a 4-digit suffix that may be assigned by a parent (controlling) business concern. This 4-digit suffix may be assigned at the discretion of the parent business concern for such purposes as identifying subunits or affiliates of the parent business concern.

(4) "Registered in the CCR database" means that all mandatory information, including the DUNS number or the DUNS+4 number, if applicable, and the corresponding Commercial and Government Entity (CAGE) code, is in the CCR database; the DUNS number and the CAGE code have been validated; and all edits have been successfully completed.

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee must be registered in the CCR database prior to award, during performance, and through final payment of any contract resulting from this solicitation, except for awards to foreign vendors for work to be performed outside the United States.

(2) The offeror shall provide its DUNS or, if applicable, its DUNS+4 number with its offer, which will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(3) Lack of registration in the CCR database will make an offeror ineligible for award.

(4) DoD has established a goal of registering an applicant in the CCR database within 48 hours after receipt of a complete and accurate application via the Internet. However, registration of an applicant submitting an application through a method other than the Internet may take up to 30 days. Therefore, offerors that are not registered should consider applying for registration immediately upon receipt of this solicitation.

(c) The Contractor is responsible for the accuracy and completeness of the data within the CCR, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to confirm on an annual basis that its information in the CCR database is accurate and complete.

(d) Offerors and contractors may obtain information on registration

and annual confirmation requirements by calling 1-888-227-2423, or via the Internet at <http://ccr.edi.disa.mil>.

(End of clause)

20 52.214-5000 ARITHMETIC DISCREPANCIES (MAR 1995)--EFARS

(a) For the purpose of initial evaluations of bids, the following will be utilized in the resolving arithmetic discrepancies found on the face of bidding schedule as submitted by the bidder:

- (1) Obviously misplaced decimal points will be corrected
- (2) Discrepancy between unit price and extended price, the unit price will govern;
- (3) Apparent errors in extension of unit prices will be corrected
- (4) Apparent errors in addition of lump-sum and extended prices will be corrected.

(b) For the purpose of bid evaluation, the government will proceed on the assumption that the bidder intends his bid to be evaluated on basis of the unit prices, the totals arrived at by resolution of arithmetic discrepancies as provided above and the bid will be so reflected on the abstract of bids.

(c) These correction procedures shall not be used to resolve any ambiguity concerning which bid is low.

(End of statement)

21 52.0-4021 AUTHORIZATION

This Contract is effected pursuant to 10 USC 2304.

(end of clause)

22 52.0-4026 TELEGRAPHIC MODIFICATIONS

Telegraphic bids/offers are not authorized, however, modification or withdrawal of bids/offers by telegram is authorized provided telegraphic notice is submitted so as to be received in the office designated in this Solicitation not later than the exact time set for opening of bids/receipt of proposals. The telegraphic modification or withdrawal received in such office by telephone from the receiving telegraph office not later than the time set for opening of bids/receipt of proposals shall be considered if such message is confirmed by the telegraph company by sending a copy of the telegram which formed the basis for the telephone call. NOTE: The term "telegram" includes mailgrams.

(end of clause)

23 52.0-4156 AMENDMENTS PRIOR TO DATE SET FOR OPENING BIDS

The right is reserved, as the interest of the Government may require, to revise or amend the specifications or drawings or both prior to the date set for opening bids. Such revisions and amendments, if any, will be announced by an amendment or amendments to this Solicitation. If the revisions and amendments are of a nature which requires material changes in quantities or prices bid or both, the date set for opening bids may be postponed by such number of days as in the opinion of the issuing officer will enable bidders to revise their bids. In such cases, the amendment will include an announcement of the new date for opening bids.

(end of clause)



The low bidder shall, upon request of the Contracting Officer, furnish a statement of whether he or she is now or ever has been engaged in any work similar to that covered by the specifications herein, the dollar value thereof, the year in which such work was performed, a brief description of the work, and the manner of its execution, and giving such other information as will tend to show the bidder's ability to prosecute the required work. The bidder shall furnish the above information for at least 4 commercial firms and/or Government agencies for whom he or she has performed work. The "such other information" referred to above shall include but is not limited to the following:

(1) The name and address of the office or firm under which such work was performed.

(2) A brief history of business experience, including length of time in present business.

(3) A list of key personnel available for instant project and their qualifications.

(4) A copy of bidder's latest financial statement, including the names of banks or other financial institutions with which the bidder conducts business. If the financial statement is more than 60 days old, a certificate should be attached stating that the financial condition is substantially the same, or if not the same, the changes that have taken place. Such statement will be treated as confidential.

(5) A list of present commitments, including the dollar value thereof, and name of office under which the work is being performed.

(6) A list of the plant available to the bidder and proposed for use on the work.

(end of clause)

Prospective bidders are encouraged to submit written questions on any aspect of the Solicitation. In this connection, see the paragraph entitled "Explanation to Prospective Bidders" of SECTION 00100, INSTRUCTIONS TO BIDDERS. Responses to written or verbal questions that result in a change to the plans and specifications will be answered by amendment only in order to provide all prospective bidders the changes at the same time. All TECHNICAL questions, written or verbal, regarding this Solicitation, before bids have been opened, should be referred to Earl a. Ehlers

314-331-8282, FAX 314-331-8244,  
U.S. Army Corps of Engineers, RAY Building, 1222 Spruce Street, St. Louis, Missouri 63103-2833. Questions concerning CONTRACTUAL matters or information on obtaining plans, specifications, and bidding documents should be referred to Joan Brickey,

Contract Specialist, Contracting Division, 4th Floor, Room 4.207, address as above, (314/331-8521) FAX (314/331-8746). COLLECT TELEPHONE CALLS WILL NOT BE ACCEPTED.

(end of clause)

All requests to review items listed in SPECIAL CLAUSE 00800-6a should be referred to Civil Engineering/Specifications Section (Telephone, 314/331-8282 or 314/331-8223; FAX, 314-331-8244), Room 3.302, U.S. Army Corps of Engineers, RAY Building, 1222 Spruce Street, St. Louis, Missouri 63103-2833.

(end of clause)

27      52.0-4164      QUANTITIES IN LUMP SUM ITEMS

Estimates of quantities involved in certain items of work for which bids are being solicited on a lump sum or job basis have been made for the use of the Government. Copies of these quantity estimates may be obtained by contacting the Contracting Division, Telephone No. 314/331- 8521

Dept. of the Army, St. Louis District, Corps of Engineers, RAY Building, 1222 Spruce Street, St. Louis, Missouri 63103-2833. It is to be expressly understood that the accuracy of these estimates is in no wise warranted and that the furnishing of this information to a bidder will not relieve the bidder of its responsibility to estimate the quantities involved. It is further to be expressly understood that in no case will such estimates be used as a basis of a claim against the Government.

(end of clause)

28      52.0-4165      SITE OF THE WORK

Bidders are advised that for the purpose of applicability of the Davis-Bacon Act and other contract labor standards provisions, "the site of the work" under the contract to be awarded pursuant to this Solicitation may not be limited to the physical place(s) where the construction called for in the contract will remain when work on it has been completed. The "site of the work" may include other adjacent or nearby property used by the contractor or subcontractors during such construction. For example, fabrication plants, mobile factories, batch plants, borrow pits, job headquarters, tool yards, etc., will be considered part of the site of the work, provided they are dedicated exclusively or nearly so to performance on the contract and are so located in proximity to the actual construction location that it would be reasonable to include them.

(end of clause)

29      52.0-4168      VALUE ENGINEERING (VE) PAYMENT TO CONTRACTORS

Value Engineering. Special attention is invited to the Contract Clause entitled, "Value Engineering--Construction". The St. Louis District policy to authorize immediate payment to contractors for their portion of VECP savings is an important step in providing adequate incentives to contractors for their support of this program. Carefully review the contract documents for potential savings and submit ideas promptly upon award to maximize savings.

(end of clause)

30      52.0-4169      WORK TO BE PERFORMED BY CONTRACTOR'S OWN ORGANIZATION

Within five days after award the successful bidder/contractor must furnish the Contracting Officer a description of the items of work which will be performed with its own forces and the estimated cost of those items. (See Section 00700, Clause 15, FAR 52.219-14 LIMITATIONS ON SUBCONTRACTING)

(end of clause)

31      52.0-4170      TEMPORARY PROJECT SAFETY FENCING

Bidders are advised that Paragraph 04.A.04 of Safety and Health

Requirements Manual EM 385-1-1 dated 3 September 1996, requires temporary project safety fencing on projects located in areas actively utilized by the general public. The requirements for temporary project safety fencing on this project are specified in SECTION 01500 entitled TEMPORARY CONSTRUCTION FACILITIES, and are shown on Drawing No. K-C-3/C-1

(end of clause)

32 52.0-4203 I EQUIPMENT OWNERSHIP AND OPERATION EXPENSE SCHEDULE

Whenever a modification or equitable adjustment of contract price is required, the Contractor's cost proposals for equipment ownership and operating expenses shall be determined in accordance with the requirements of SECTION 00800, Special Clause entitled EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE. A copy of EP 1110-1-8 "Construction Equipment Ownership and Operating Expense Schedule" is available for review by bonafide bidders in the St. Louis District, Corps of Engineers, Technical Library, Room 4.202, RAY Building, 1222 Spruce Street, St. Louis, Missouri 63103-2833, Telephone 314-331-8883, Fax 314-331-8873;

for additional information call or write to:

Superintendent of Documents  
P.O. Box 371954  
Pittsburgh, PA 15250-7954  
Telephone 202-783-3238

or may be purchased from:

U.S. Government Regional Bookstore  
No. 120 Bannister Mall  
5600 East Bannister Road  
Kansas City, MO 64137  
Telephone 816-767-8225

(end of clause)

33 52.228-4115 BONDS

a. BID BOND/BID GUARANTEE - Each bidder shall submit WITH HIS/HER BID a Bid Bond/Bid Guarantee in the amount and form prescribed in Section 00700, Contract Clause FAR 52.228-1 "BID GUARANTEE".

b. PERFORMANCE AND PAYMENT BONDS - Within 10 days after the prescribed forms are presented to the successful bidder, Performance and Payment bonds in good and sufficient surety or sureties acceptable to the Government shall be furnished. This requirement is further discussed in Contract Clause FAR 52.228-15 "PERFORMANCE AND PAYMENT BONDS-- CONSTRUCTION".

Performance and Payment bonds shall be furnished by the Contractor to the Government prior to commencement of contract performance.

FAILURE TO INCLUDE BID BOND OR OTHER BID SECURITY ON TIME MAY BE CAUSE FOR REJECTION OF THE BID AS NONRESPONSIVE. LATE BOND OR OTHER SECURITY WILL BE TREATED IN THE SAME MANNER AS LATE BIDS.

(ALSO SEE SECTION 00100 -- FAR 52.214-7)

(end of clause)

34 52.229-4003 STATE OF MISSOURI SALES TAX

After contract award, the successful Contractor, his/her subcontractors and material suppliers, may claim an exemption from Missouri sales tax on federal construction projects. UPON REQUEST,

the Contracting Officer will provide the appropriate tax exempt certificate.

(End of Clause)

END OF SECTION 00100

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## SECTION 00600

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SECTION 00600

REPRESENTATIONS & CERTIFICATIONS

1 52.203-2 CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)

(a) The offeror certifies that--

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices, (ii) the intention to submit an offer, or (iii) the methods or factors used to calculate the prices offered;

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory--

(1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above; or

(2)(i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above \_\_\_\_\_

(insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization);

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the offeror deletes or modifies subparagraph (a)(2) above, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

(End of provision)

2 52.203-11 CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (APR 1991)

(a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by

reference in paragraph (b) of this certification.

(b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that on or after December 23, 1989--

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer and

(3) He or she will include the language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

(End of provision)

3 52.204-3 TAXPAYER IDENTIFICATION (JUN 1997)

(a) Definitions.

"Common parent," as used in this solicitation provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

"Corporate status," as used in this solicitation provision, means a designation as to whether the offeror is a corporate entity, an unincorporated entity (e.g., sole proprietorship or partnership), or a corporation providing medical and health care services.

"Taxpayer Identification Number (TIN)," as used in this solicitation provision, means the number required by the IRS to be used by the offeror in reporting income tax and other returns.

(b) All offerors are required to submit the information required in paragraphs (c) through (e) of this solicitation provision in order to comply with reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M and implementing regulations issued by the Internal Revenue Service (IRS). If the resulting contract is subject to the reporting requirements described in FAR 4.903, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) Taxpayer Identification Number (TIN).

/\_/ TIN: \_\_\_\_\_.

/\_/ TIN has been applied for.

/\_/ TIN is not required because:



☐ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the U.S. and does not have an office or place of business or a fiscal paying agent in the U.S.;

☐ Offeror is an agency or instrumentality of a foreign government;

☐ Offeror is an agency or instrumentality of a Federal, state, or local government;

☐ Other. State basis. \_\_\_\_\_

(d) Corporate Status.

☐ Corporation providing medical and health care services, or engaged in the billing and collecting of payments for such services;

☐ Other corporate entity;

☐ Not a corporate entity;

☐ Sole proprietorship

☐ Partnership

☐ Hospital or extended care facility described in 26 CFR 501(c)(3) that is exempt from taxation under 26 CFR 501(a).

(e) Common Parent.

☐ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.

☐ Name and TIN of common parent:

Name \_\_\_\_\_

TIN \_\_\_\_\_

(End of provision)

4      52.209-5      CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (MAR 1996)

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that--

(i) The Offeror and/or any of its Principals--

(A) Are / / are not / / presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have / / have not / /, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are / / are not / / presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.

(ii) The Offeror has / / has not / /, within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity

(e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

(End of provision)

5      52.214-2            TYPE OF BUSINESS ORGANIZATION--SEALED BIDDING (JUL 1987)

The bidder, by checking the applicable box, represents that--

(a) It operates as ☐ a corporation incorporated under the laws of the State of \_\_\_\_\_, ☐ an individual, ☐ a partnership, ☐ a nonprofit organization, or ☐ a joint venture; or

(b) If the bidder is a foreign entity, it operates as ☐ an individual, ☐ a partnership, ☐ a nonprofit organization, ☐ a joint venture, or ☐ a corporation, registered for business in \_\_\_\_\_.

(country)

(End of provision)

6      52.219-1            SMALL BUSINESS PROGRAM REPRESENTATIONS (OCT 1998)

(a)(1) The standard industrial classification (SIC) code for this acquisition is 1629

(2) The small business size standard is \$17 million

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) Representations. (1) The offeror represents as part of its offer that it ☐ is, ☐ is not a small business concern.

(2) (Complete only if offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents, for general statistical purposes, that it ☐ is, ☐ is not, a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) (Complete only if offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it [ ] is, [ ] is not a women-owned small business concern.

(c) Definitions.

"Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

"Women-owned small business concern," as used in this provision, means a small business concern--

(1) Which is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) Notice. (1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small or small disadvantaged business concern in order to obtain a contract to be awarded under the preference programs established pursuant to sections 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall--

(i) Be punished by imposition of fine, imprisonment, or both

(ii) Be subject to administrative remedies, including suspension and debarment; and

(iii) Be ineligible for participation in programs conducted under the authority of the Act.

(End of provision)

7 52.219-2 EQUAL LOW BIDS (OCT 1995)

(a) This provision applies to small business concerns only.

(b) The bidder's status as a labor surplus area (LSA) concern may affect entitlement to award in case of tie bids. If the bidder wishes to be considered for this priority, the bidder must identify, in the following space, the LSA in which the costs to be incurred on account of manufacturing or production (by the bidder or the first-tier subcontractors) amount to more than 50 percent of the contract price.

---

(c) Failure to identify the labor surplus areas as specified in paragraph (b) of this provision will preclude the bidder from receiving priority consideration. If the bidder is awarded a contract as a result of receiving priority consideration under this provision and would not have otherwise received award, the bidder shall perform the contract or cause the contract to be performed in accordance with the obligations of an LSA concern.

(End of provision)

8 52.219-19 SMALL BUSINESS CONCERN REPRESENTATION FOR THE SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM (JAN 1997)

(a) Definition.

"Emerging small business" as used in this solicitation, means a small business concern whose size is no greater than 50 percent of the numerical size standard applicable to the standard industrial classification code assigned to a contracting opportunity.

(b) (Complete only if the Offeror has represented itself under the provision at 52.219-1 as a small business concern under the size standards of this solicitation.)

The Offeror [ ] is, [ ] is not an emerging small business.

(c) (Complete only if the Offeror is a small business or an emerging small business, indicating its size range.)

Offeror's number of employees for the past 12 months (check this column if size standard stated in solicitation is expressed in terms of number of employees) or Offeror's average annual gross revenue for the last 3 fiscal years (check this column if size standard stated in solicitation is expressed in terms of annual receipts). (Check one of the following.)

No. of Employees	Avg. Annual Gross Revenues
_____ 50 or fewer	_____ \$1 million or less
_____ 51-100	_____ \$1,000,001-\$2 million
_____ 101-250	_____ \$2,000,001-\$3.5 million
_____ 251-500	_____ \$3,500,001-\$5 million
_____ 501-750	_____ \$5,000,001-\$10 million
_____ 751-1,000	_____ \$10,000,001-\$17 million
_____ Over 1,000	_____ Over \$17 million

(End of provision)

9 52.222-22 PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (APR 1984)

The offeror represents that--

(a) It /\_/ has, /\_/ has not, participated in a previous contract or subcontract subject either to the Equal Opportunity clause of this solicitation, the clause originally contained in Section 310 of Executive Order No. 10925, or the clause contained in Section 201 of Executive Order No. 11114;

(b) It /\_/ has, /\_/ has not, filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

(End of provision)

(R 7-2003.14(b)(1)(B) 1973 APR)

10 52.222-23 NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (APR 1984)

(a) The offeror's attention is called to the Equal Opportunity clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.

(b) The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

-----	-----
Goals for minority participation	Goals for female participation for
for each trade	each trade
-----	-----
14.7	6.9

-----|-----  
These goals are applicable to all the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs office.

(c) The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on (1) its implementation of the Equal Opportunity clause, (2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction," and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

(d) The Contractor shall provide written notification to the Director, Office of Federal Contract Compliance Programs, within 10 working days following award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the--

- (1) Name, address, and telephone number of the subcontractor;
- (2) Employer's identification number of the subcontractor;
- (3) Estimated dollar amount of the subcontract
- (4) Estimated starting and completion dates of the subcontract; and
- (5) Geographical area in which the subcontract is to be performed.

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is Illinois, Clinton, Carlyle.

(End of provision)

(R 7-2003.14(d) 1978 SEP)

11 52.223-1 CLEAN AIR AND WATER CERTIFICATION (APR 1984)

The Offeror certifies that--

(a) Any facility to be used in the performance of this proposed contract is /\_/ is not /\_/ listed on the Environmental Protection Agency (EPA) List of Violating Facilities;

(b) The Offeror will immediately notify the Contracting Officer, before award, of the receipt of any communication from the Administrator, or a designee, of the EPA, indicating that any facility that the Offeror proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and

(c) The Offeror will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

(End of provision)

(AV 7-2003.71 1977 JUN)

(AV 1-1.2302-1)

12 52.223-13 CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (OCT 1996)

(a) Submission of this certification is a prerequisite for making or

entering into this contract imposed by Executive Order 12969, August 8, 1995.

(b) By signing this offer, the offeror certifies that----

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: (Check each block that is applicable.)

/\_\_\_/ (i) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

/\_\_\_/ (ii) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);

/\_\_\_/ (iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

/\_\_\_/ (iv) The facility does not fall within Standard Industrial Classification Code (SIC) designations 20 through 39 as set forth in Section 19.102 of the Federal Acquisition Regulation; or

/\_\_\_/ (v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

(End of provision)

13. 52.227-4 PATENT INDEMNITY-CONSTRUCTION CONTRACTS (APR 1984)

Except as otherwise provided, the Contractor agrees to indemnify the Government and its officers, agents, and employees against liability, including costs and expenses, for infringement upon any United States patent (except a patent issued upon an application that is now or may hereafter be withheld from issued pursuant to a Secrecy Order under 35 U. S. C. 818) arising out of performing this contract or out of the use or disposal by or for the account of the Government of supplies furnished or work performed under this contract.

(end of clause)

(R 7-602.16 1964 JUN)

14 52.209-7001 DISCLOSURE OF OWNERSHIP OR CONTROL BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 1998)

(a) Definitions.

As used in this provision--

(1) "Government of a terrorist country" includes the state and the

government of a terrorist country, as well as any political subdivision, agency, or instrumentality thereof.

(2) "Terrorist country" means a country determined by the Secretary of State, under section 6(j)(1)(A) of the Export Administration Act of 1979 (50 U.S.C. App. 2405(j)(i)(A)), to be a country the government of which has repeatedly provided support for acts of international terrorism. As of the date of this provision, terrorist countries include: Cuba, Iran, Iraq, Libya, North Korea, Sudan, and Syria.

(3) "Significant interest" means--

(i) Ownership of or beneficial interest in 5 percent or more of the firm's or subsidiary's securities. Beneficial interest includes holding 5 percent or more of any class of the firm's securities in "nominee shares," "street names," or some other method of holding securities that does not disclose the beneficial owner;

(ii) Holding a management position in the firm, such as a director or officer;

(iii) Ability to control or influence the election, appointment, or tenure of directors or officers in the firm;

(iv) Ownership of 10 percent or more of the assets of a firm such as equipment, buildings, real estate, or other tangible assets of the firm; or

(v) Holding 50 percent or more of the indebtedness of a firm.

(b) Prohibition on award. In accordance with 10 U.S.C. 2327, no contract may be awarded to a firm or a subsidiary of a firm if the government of a terrorist country has a significant interest in the firm or subsidiary or, in the case of a subsidiary, the firm that owns the subsidiary, unless a waiver is granted by the Secretary of Defense.

(c) Disclosure.

If the government of a terrorist country has a significant interest in the Offeror or a subsidiary of the Offeror, the Offeror shall disclose such interest in an attachment to its offer. If the Offeror is a subsidiary, it shall also disclose any significant interest the government of a terrorist country has in any firm that owns or controls the subsidiary. The disclosure shall include--

(1) Identification of each government holding a significant interest; and

(2) A description of the significant interest held by each government.  
(End of provision)

15      52.219-7000      RESERVED

16      52.247-7022      REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA (AUG 1992)

(a) The Offeror shall indicate by checking the appropriate blank in paragraph (b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term "supplies" is defined in the Transportation of Supplies by Sea clause of this solicitation.

(b) Representation. The Offeror represents that it--

\_\_\_\_\_ Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

\_\_\_\_\_ Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that

it will not use ocean transportation, the resulting contract will also include the Defense FAR Supplement clause at 252.247-7024, Notification of Transportation of Supplies by Sea.

(End of provision)

END OF SECTION 00600



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SECTION 00700

CONTRACT CLAUSES

1 NOT USED

2 NOT USED

3 52.202-1 I DEFINITIONS (OCT 1995)--ALTERNATE I (APR 1984)

(a) "Head of the agency" (also called "agency head") or "Secretary" means the Secretary (or Attorney General, Administrator, Governor, Chairperson, or other chief official, as appropriate) of the agency, including any deputy or assistant chief official of the agency; and the term "authorized representative" means any person, persons, or board (other than the Contracting Officer) authorized to act for the head of the agency or Secretary.

(b) Commercial component means any component that is a commercial item.

(c) Component means any item supplied to the Federal Government as part of an end item or of another component.

(d) Nondevelopmental item means--

(1) Any previously developed item of supply used exclusively for governmental purposes by a Federal agency, a State or local government, or a foreign government with which the United States has a mutual defense cooperation agreement;

(2) Any item described in paragraph (e)(1) of this definition that requires only minor modification or modifications of a type customarily available in the commercial marketplace in order to meet the requirements of the procuring department or agency; or

(3) Any item of supply being produced that does not meet the requirements of paragraph (e)(1) or (e)(2) solely because the item is not yet in use.

(e) "Contracting Officer" means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.

(f) Except as otherwise provided in this contract, the term "subcontracts" includes, but is not limited to, purchase orders and changes and modifications to purchase orders under this contract.

(End of clause)

4 52.203-3 GRATUITIES (APR 1984)

(a) The right of the Contractor to proceed may be terminated by written notice if, after notice and hearing, the agency head or a designee determines that the Contractor, its agent, or another representative--

(1) Offered or gave a gratuity (e.g., an entertainment or gift) to an officer, official, or employee of the Government; and

(2) Intended, by the gratuity, to obtain a contract or favorable treatment under a contract.

(b) The facts supporting this determination may be reviewed by any court having lawful jurisdiction.

(c) If this contract is terminated under paragraph (a) above, the Government is entitled--

(1) To pursue the same remedies as in a breach of the contract; and

(2) In addition to any other damages provided by law, to exemplary damages of not less than 3 nor more than 10 times the cost incurred by

the Contractor in giving gratuities to the person concerned, as determined by the agency head or a designee. (This subparagraph (c)(2) is applicable only if this contract uses money appropriated to the Department of Defense.)

(d) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)  
(R 7-104.16 1952 MAR)

5      52.203-5      COVENANT AGAINST CONTINGENT FEES (APR 1984)

(a) The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of the contingent fee.

(b) "Bona fide agency," as used in this clause, means an established commercial or selling agency, maintained by a contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.

"Bona fide employee," as used in this clause, means a person, employed by a Contractor and subject to the Contractor's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.

"Contingent fee," as used in this clause, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.

"Improper influence," as used in this clause, means any influence that induces or tends to induce a Government employee or officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

(End of clause)  
(R 7-103.20 1958 JAN)  
(R 1-1.503)  
(R 1-7.102-18)

6      52.203-7      ANTI-KICKBACK PROCEDURES (JUL 1995)

(a) Definitions.

"Kickback," as used in this clause, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided, directly or indirectly, to any prime Contractor, prime Contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract.

"Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.

"Prime contract," as used in this clause, means a contract or contractual action entered into by the United States for the purpose of

obtaining supplies, materials, equipment, or services of any kind.

"Prime Contractor" as used in this clause, means a person who has entered into a prime contract with the United States.

"Prime Contractor employee," as used in this clause, means any officer, partner, employee, or agent of a prime Contractor.

"Subcontract," as used in this clause, means a contract or contractual action entered into by a prime Contractor or subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind under a prime contract.

"Subcontractor," as used in this clause, (1) means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a subcontract entered into in connection with such prime contract, and (2) includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

"Subcontractor employee," as used in this clause, means any officer, partner, employee, or agent of a subcontractor.

(b) The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) (the Act), prohibits any person from--

(1) Providing or attempting to provide or offering to provide any kickback;

(2) Soliciting, accepting, or attempting to accept any kickback; or

(3) Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States or in the contract price charged by a subcontractor to a prime Contractor or higher tier subcontractor.

(c)(1) The Contractor shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in paragraph (b) of this clause in its own operations and direct business relationships.

(2) When the Contractor has reasonable grounds to believe that a violation described in paragraph (b) of this clause may have occurred, the Contractor shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting agency, the head of the contracting agency if the agency does not have an inspector general, or the Department of Justice.

(3) The Contractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph (b) of this clause.

(4) The Contracting Officer may (i) offset the amount of the kickback against any monies owed by the United States under the prime contract and/or (ii) direct that the Prime Contractor withhold from sums owed a subcontractor under the prime contract the amount of the kickback. The Contracting Officer may order that monies withheld under subdivision (c)(4)(ii) of this clause be paid over to the Government unless the Government has already offset those monies under subdivision (c)(4)(i) of this clause. In either case, the Prime Contractor shall notify the Contracting Officer when the monies are withheld.

(5) The Contractor agrees to incorporate the substance of this clause, including subparagraph (c)(5) but excepting subparagraph (c)(1), in all subcontracts under this contract which exceed \$100,000.

(End of clause)

7      52.203-8              CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL  
OR IMPROPER ACTIVITY (JAN 1997)

(a) If the Government receives information that a contractor or a person

has engaged in conduct constituting a violation of subsection (a), (b), (c), or (d) of Section 27 of the Office of Federal Procurement Policy Act (41 U.S.C. 423) (the Act), as amended by section 4304 of the National Defense Authorization Act for Fiscal Year 1996 (Pub. L. 104-106), the Government may--

(1) Cancel the solicitation, if the contract has not yet been awarded or issued; or

(2) Rescind the contract with respect to which--

(i) The Contractor or someone acting for the Contractor has been convicted for an offense where the conduct constitutes a violation of subsection 27 (a) or (b) of the Act for the purpose of either--

(A) Exchanging the information covered by such subsections for anything of value; or

(B) Obtaining or giving anyone a competitive advantage in the award of a Federal agency procurement contract; or

(ii) The head of the contracting activity has determined, based upon a preponderance of the evidence, that the Contractor or someone acting for the Contractor has engaged in conduct constituting an offense punishable under subsection 27(e)(1) of the Act.

(b) If the Government rescinds the contract under paragraph (a) of this clause, the Government is entitled to recover, in addition to any penalty prescribed by law, the amount expended under the contract.

(c) The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law, regulation, or under this contract.

(End of clause)

8      52.203-10      PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) The Government, at its election, may reduce the price of a fixed-price type contract and the total cost and fee under a cost-type contract by the amount of profit or fee determined as set forth in paragraph (b) of this clause if the head of the contracting activity or designee determines that there was a violation of subsection 27 (a), (b), or (c) of the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 423), as implemented in section 3.104 of the Federal Acquisition Regulation.

(b) The price or fee reduction referred to in paragraph (a) of this clause shall be--

(1) For cost-plus-fixed-fee contracts, the amount of the fee specified in the contract at the time of award;

(2) For cost-plus-incentive-fee contracts, the target fee specified in the contract at the time of award, notwithstanding any minimum fee or "fee floor" specified in the contract;

(3) For cost-plus-award-fee contracts--

(i) The base fee established in the contract at the time of contract award;

(ii) If no base fee is specified in the contract, 30 percent of the amount of each award fee otherwise payable to the Contractor for each award fee evaluation period or at each award fee determination point.

(4) For fixed-price-incentive contracts, the Government may--

(i) Reduce the contract target price and contract target profit both by an amount equal to the initial target profit specified in the contract at the time of contract award; or

(ii) If an immediate adjustment to the contract target price and contract target profit would have a significant adverse impact on the incentive price revision relationship under the contract, or adversely affect the contract financing provisions, the Contracting Officer may



defer such adjustment until establishment of the total final price of the contract. The total final price established in accordance with the incentive price revision provisions of the contract shall be reduced by an amount equal to the initial target profit specified in the contract at the time of contract award and such reduced price shall be the total final contract price.

(5) For firm-fixed-price contracts, by 10 percent of the initial contract price or a profit amount determined by the Contracting Officer from records or documents in existence prior to the date of the contract award.

(c) The Government may, at its election, reduce a prime contractor's price or fee in accordance with the procedures of paragraph (b) of this clause for violations of the Act by its subcontractors by an amount not to exceed the amount of profit or fee reflected in the subcontract at the time the subcontract was first definitively priced.

(d) In addition to the remedies in paragraphs (a) and (c) of this clause, the Government may terminate this contract for default. The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

9      52.203-12      LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL  
TRANSACTIONS (JUN 1997)

(a) Definitions.

"Agency," as used in this clause, means executive agency as defined in 2.101.

"Covered Federal action," as used in this clause, means any of the following Federal actions:

- (1) The awarding of any Federal contract.
- (2) The making of any Federal grant.
- (3) The making of any Federal loan.
- (4) The entering into of any cooperative agreement.
- (5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

"Influencing or attempting to influence," as used in this clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government," as used in this clause, means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency," as used in this clause, includes the following individuals who are employed by an agency:

- (1) An individual who is appointed to a position in the Government under title 5, United States Code, including a position under a temporary appointment.
- (2) A member of the uniformed services, as defined in subsection 101(3), title 37, United States Code.
- (3) A special Government employee, as defined in section 202, title 18,

United States Code.

(4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, title 5, United States Code, appendix 2.

"Person," as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation," as used in this clause, means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment," as used in this clause, means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient," as used in this clause, includes the Contractor and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed," as used in this clause, means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State," as used in this clause, means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibitions.

(1) Section 1352 of title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan, or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The Act also requires Contractors to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

(3) The prohibitions of the Act do not apply under the following conditions:

(i) Agency and legislative liaison by own employees.

(A) The prohibition on the use of appropriated funds, in

subparagraph (b)(1) of this clause, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(B) For purposes of subdivision (b)(3)(i)(A) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

(C) The following agency and legislative liaison activities are permitted at any time where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency the qualities and characteristics (including individual demonstrations) of the person's products or services, conditions or terms of sale, and service capabilities.

(2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(D) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action--

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Pub. L. 95-507, and subsequent amendments.

(E) Only those services expressly authorized by subdivision (b)(3)(i)(A) of this clause are permitted under this clause.  
(ii) Professional and technical services.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of--

(1) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.

(2) Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract

is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.

(D) Only those services expressly authorized by subdivisions (b)(3)(ii)(A)(1) and (2) of this clause are permitted under this clause.

(E) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(c) Disclosure.

(1) The Contractor who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, OMB standard form LLL, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph (b)(1) of this clause, if paid for with appropriated funds.

(2) The Contractor shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph (c)(1) of this clause. An event that materially affects the accuracy of the information reported includes--

(i) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(ii) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

(iii) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(3) The Contractor shall require the submittal of a certification, and if required, a disclosure form by any person who requests or receives any subcontract exceeding \$100,000 under the Federal contract.

(4) All subcontractor disclosure forms (but not certifications) shall be forwarded from tier to tier until received by the prime Contractor. The prime Contractor shall submit all disclosures to the Contracting Officer at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding Contractor.

(d) Agreement. The Contractor agrees not to make any payment prohibited by this clause.

(e) Penalties.

(1) Any person who makes an expenditure prohibited under paragraph (a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph (b) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

(2) Contractors may rely without liability on the representation made by their subcontractors in the certification and disclosure form.

(f) Cost allowability. Nothing in this clause makes allowable or reasonable any costs which would otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any other provision.

(End of clause)

10      52.204-4              PRINTING/COPYING DOUBLE-SIDED ON RECYCLED PAPER (JUN 1996)

(a) In accordance with Executive Order 12873, dated October 20, 1993, as amended by Executive Order 12995, dated March 25, 1996, the Offeror/Contractor is encouraged to submit paper documents, such as offers, letters, or reports, that are printed/copied double-sided on recycled paper that has at least 20 percent postconsumer material.

(b) The 20 percent standard applies to high-speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, white woven envelopes, and other uncoated printed and writing paper, such as writing and office paper, book paper, cotton fiber paper, and cover stock. An alternative to meeting the 20 percent postconsumer material standard is 50 percent recovered material content of certain industrial by-products.

(End of clause)

11      52.209-6              PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (JUL 1995)

(a) The Government suspends or debar Contractors to protect the Government's interest. The Contractor shall not enter into any subcontract in excess of \$25,000 with a Contractor that is debarred, suspended, or proposed for debarment unless there is a compelling reason to do so.

(b) The Contractor shall require each proposed first-tier subcontractor, whose subcontract will exceed \$25,000, to disclose to the Contractor, in writing, whether as of the time of award of the subcontract, the subcontractor, or its principals, is or is not debarred, suspended, or proposed for debarment by the Federal Government.

(c) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is debarred, suspended, or proposed for debarment (see FAR 9.404 for information on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs). The notice must include the following:

(1) The name of the subcontractor.

(2) The Contractor's knowledge of the reasons for the subcontractor being on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.

(3) The compelling reason(s) for doing business with the subcontractor notwithstanding its inclusion on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.

(4) The systems and procedures the Contractor has established to ensure that it is fully protecting the Government's interests when dealing with such subcontractor in view of the specific basis for the party's debarment, suspension, or proposed debarment.

(End of clause)

12      52.211-18      VARIATION IN ESTIMATED QUANTITY (APR 1984)

If the quantity of a unit-priced item in this contract is an estimated quantity and the actual quantity of the unit-priced item varies more than 15 percent above or below the estimated quantity, an equitable adjustment in the contract price shall be made upon demand of either party. The equitable adjustment shall be based upon any increase or decrease in costs due solely to the variation above 115 percent or below 85 percent of the estimated quantity. If the quantity variation is such as to cause an increase in the time necessary for completion, the Contractor may request, in writing, an extension of time, to be received by the Contracting Officer within 10 days from the beginning of the delay, or within such further period as may be granted by the Contracting Officer before the date of final settlement of the contract. Upon the receipt of a written request for an extension, the Contracting Officer shall ascertain the facts and make an adjustment for extending the completion date as, in the judgement of the Contracting Officer, is justified.

(End of clause)

13      52.219-6      NOTICE OF TOTAL SMALL BUSINESS SET-ASIDE (JUL 1996)

(a) Definition.

"Small business concern," as used in this clause, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the size standards in this solicitation.

(b) General. (1) Offers are solicited only from small business concerns. Offers received from concerns that are not small business concerns shall be considered nonresponsive and will be rejected.

(2) Any award resulting from this solicitation will be made to a small business concern.

(c) Agreement. A small business concern submitting an offer in its own name agrees to furnish, in performing the contract, only end items manufactured or produced by small business concerns in the United States. The term "United States" includes its territories and possessions, the Commonwealth of Puerto Rico, the Trust Territory of the Pacific Islands, and the District of Columbia. If this procurement is processed under simplified acquisition procedures and the total amount of this contract does not exceed \$25,000, a small business concern may furnish the product of any domestic firm. This paragraph does not apply in connection with construction or service contracts.

(End of clause)

14      52.219-8      UTILIZATION OF SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED  
SMALL BUSINESS CONCERNS (JUN 1997)

(a) It is the policy of the United States that small business concerns, small business concerns owned and controlled by socially and economically disadvantaged individuals and small business concerns owned and controlled by women shall have the maximum practicable opportunity to participate in

performing contracts let by any Federal agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for major systems. It is further the policy of the United States that its prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns, small business concerns owned and controlled by socially and economically disadvantaged individuals and small business concerns owned and controlled by women.

(b) The Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with efficient contract performance. The Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of the Contractor's compliance with this clause.

(c) As used in this contract, the term "small business concern" shall mean a small business as defined pursuant to section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto. The term "small business concern owned and controlled by socially and economically disadvantaged individuals" shall mean a small business concern (1) which is at least 51 percent unconditionally owned by one or more socially and economically disadvantaged individuals; or, in the case of any publicly owned business, at least 51 per centum of the stock of which is unconditionally owned by one or more socially and economically disadvantaged individuals; and (2) whose management and daily business operations are controlled by one or more of such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one of these entities which has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian Organization, and which meets the requirements of 13 CFR 124. The Contractor shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Subcontinent Asian Americans, and other minorities, or any other individual found to be disadvantaged by the Administration pursuant to section 8(a) of the Small Business Act. The Contractor shall presume that socially and economically disadvantaged entities also include Indian Tribes and Native Hawaiian Organizations.

(d) The term "small business concern owned and controlled by women" shall mean a small business concern (1) which is at least 51 percent owned by one or more women, or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women, and (2) whose management and daily business operations are controlled by one or more women; and

(e) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as a small business concern, a small business concern owned and controlled by socially and economically disadvantaged individuals or a small business concern owned and controlled by women.

(End of clause)

15      52.219-14      LIMITATIONS ON SUBCONTRACTING (DEC 1996)

(a) This clause does not apply to the unrestricted portion of a partial set-aside.

(b) By submission of an offer and execution of a contract, the Offeror/Contractor agrees that in performance of the contract in the case

of a contract for--

(1) Services (except construction). At least 50 percent of the cost of contract performance incurred for personnel shall be expended for employees of the concern.

(2) Supplies (other than procurement from a nonmanufacturer of such supplies). The concern shall perform work for at least 50 percent of the cost of manufacturing the supplies, not including the cost of materials.

(3) General construction. The concern will perform at least 15 percent of the cost of the contract, not including the cost of materials, with its own employees.

(4) Construction by special trade contractors. The concern will perform at least 25 percent of the cost of the contract, not including the cost of materials, with its own employees.

(End of clause)

16 52.222-1 NOTICE TO THE GOVERNMENT OF LABOR DISPUTES (FEB 1997)

If the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the Contractor shall immediately give notice, including all relevant information, to the Contracting Officer.

(End of clause)

17 52.222-3 CONVICT LABOR (AUG 1996)

The Contractor agrees not to employ in the performance of this contract any person undergoing a sentence of imprisonment which has been imposed by any court of a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or the Trust Territory of the Pacific Islands. This limitation, however, shall not prohibit the employment by the Contractor in the performance of this contract of persons on parole or probation to work at paid employment during the term of their sentence or persons who have been pardoned or who have served their terms. Nor shall it prohibit the employment by the Contractor in the performance of this contract of persons confined for violation of the laws of any of the States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or the Trust Territory of the Pacific Islands who are authorized to work at paid employment in the community under the laws of such jurisdiction, if--

(a)(1) The worker is paid or is in an approved work training program on a voluntary basis;

(2) Representatives of local union central bodies or similar labor union organizations have been consulted;

(3) Such paid employment will not result in the displacement of employed workers, or be applied in skills, crafts, or trades in which there is a surplus of available gainful labor in the locality, or impair existing contracts for services; and

(4) The rates of pay and other conditions of employment will not be less than those paid or provided for work of a similar nature in the locality in which the work is being performed; and

(b) The Attorney General of the United States has certified that the work-release laws or regulations of the jurisdiction involved are in conformity with the requirements of Executive Order 11755, as amended by Executive Orders 12608 and 12943.

(End of clause)



(a) Overtime requirements. No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics (see Federal Acquisition Regulation (FAR) 22.300) shall require or permit any such laborers or mechanics in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than 1 1/2 times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(b) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the provisions set forth in paragraph (a) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of the provisions set forth in paragraph (a) of this clause in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by provisions set forth in paragraph (a) of this clause.

(c) Withholding for unpaid wages and liquidated damages. The Contracting Officer shall upon his or her own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal contract with the same Prime Contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same Prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the provisions set forth in paragraph (b) of this clause.

(d) Payrolls and basic records. (1) The Contractor or subcontractor shall maintain payrolls and basic payroll records during the course of contract work and shall preserve them for a period of 3 years from the completion of the contract for all laborers and mechanics working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Nothing in this paragraph shall require the duplication of records required to be maintained for construction work by Department of Labor regulations at 29 CFR 5.5(a)(3) implementing the Davis-Bacon Act.

(2) The records to be maintained under paragraph (d)(1) of this clause shall be made available by the Contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Contracting Officer or the Department of Labor. The Contractor or subcontractor shall permit such representatives to interview employees during working hours on the job.

(e) Subcontracts. The Contractor or subcontractor shall insert in any subcontracts exceeding \$100,000, the provisions set forth in paragraphs (a) through (e) of this clause and also a clause requiring the subcontractors to include these provisions in any lower tier subcontracts. The Prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the provisions set forth in paragraphs (a) through (e) of this clause.

(End of clause)

(a) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (d) of this clause; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such period. Such laborers and mechanics shall be paid not less than the appropriate wage rate and fringe benefits in the wage determination for the classification of work actually performed, without regard to skill, except as provided in the clause entitled Apprentices and Trainees. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (b) of this clause) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(b)(1) The Contracting Officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The Contracting Officer shall approve an additional classification and wage rate and fringe benefits therefor only when all the following criteria have been met:

- (i) The work to be performed by the classification requested is not performed by a classification in the wage determination.
- (ii) The classification is utilized in the area by the construction industry.
- (iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (iv) With respect to helpers, such a classification prevails in the area in which the work is performed.

(2) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Contracting Officer agree on the classification and wage rate (including the amount designated for fringe benefits, where appropriate), a report of the action taken shall be sent by the Contracting Officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator or an authorized representative will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is

necessary.

(3) In the event the Contractor, the laborers or mechanics to be employed in the classification, or their representatives, and the Contracting Officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting Officer shall refer the questions, including the views of all interested parties and the recommendation of the Contracting Officer, to the Administrator of the Wage and Hour Division for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits, where appropriate) determined pursuant to subparagraphs (b)(2) and (b)(3) of this clause shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(c) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(d) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program; provided, that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(End of clause)

20      52.222-7      WITHHOLDING OF FUNDS (FEB 1988)

The Contracting Officer shall, upon his or her own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same Prime Contractor, or any other Federally assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same Prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(End of clause)

21      52.222-8      PAYROLLS AND BASIC RECORDS (FEB 1988)

(a) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of 3 years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification,

hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under paragraph (d) of the clause entitled Davis-Bacon Act, that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(b)(1) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under paragraph (a) of this clause. This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. The Prime Contractor is responsible for the submission of copies of payrolls by all subcontractors.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify--

(i) That the payroll for the payroll period contains the information required to be maintained under paragraph (a) of this clause and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR Part 3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph (b)(2) of this clause.

(4) The falsification of any of the certifications in this clause may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.

(c) The Contractor or subcontractor shall make the records required under paragraph (a) of this clause available for inspection, copying, or transcription by the Contracting Officer or authorized representatives of the Contracting Officer or the Department of Labor. The Contractor or subcontractor shall permit the Contracting Officer or representatives of the Contracting Officer or the Department of Labor to interview employees

during working hours on the job. If the Contractor or subcontractor fails to submit required records or to make them available, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(End of clause)

22      52.222-9      APPRENTICES AND TRAINEES (FEB 1988)

(a) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in this paragraph, shall be paid not less than the applicable wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(b) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the

rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed in the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate in the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate in the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate in the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(c) Equal employment opportunity. The utilization of apprentices, trainees, and journeymen under this clause shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

(End of clause)

23      52.222-10            COMPLIANCE WITH COPELAND ACT REQUIREMENTS (FEB 1988)

The Contractor shall comply with the requirements of 29 CFR Part 3, which are hereby incorporated by reference in this contract.

(End of clause)

24      52.222-11            SUBCONTRACTS (LABOR STANDARDS) (FEB 1988)

(a) The Contractor or subcontractor shall insert in any subcontracts the clauses entitled Davis-Bacon Act, Contract Work Hours and Safety Standards Act--Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Withholding of Funds, Subcontracts (Labor Standards), Contract Termination--Debarment, Disputes Concerning Labor Standards, Compliance with Davis-Bacon and Related Act Regulations, and Certification of Eligibility, and such other clauses as the Contracting Officer may, by appropriate instructions, require, and also a clause requiring subcontractors to include these clauses in any lower tier subcontracts. The Prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with all the contract clauses cited in this paragraph.

(b)(1) Within 14 days after award of the contract, the Contractor shall deliver to the Contracting Officer a completed Statement and Acknowledgment Form (SF 1413) for each subcontract, including the subcontractor's signed and dated acknowledgment that the clauses set forth in paragraph (a) of this clause have been included in the subcontract.

(2) Within 14 days after the award of any subsequently awarded subcontract the Contractor shall deliver to the Contracting Officer an updated completed SF 1413 for such additional subcontract.

(End of clause)

25      52.222-12      CONTRACT TERMINATION--DEBARMENT (FEB 1988)

A breach of the contract clauses entitled Davis-Bacon Act, Contract Work Hours and Safety Standards Act--Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Subcontracts (Labor Standards), Compliance with Davis-Bacon and Related Act Regulations, or Certification of Eligibility may be grounds for termination of the contract, and for debarment as a Contractor and subcontractor as provided in 29 CFR 5.12.

(End of clause)

26      52.222-13      COMPLIANCE WITH DAVIS-BACON AND RELATED ACT REGULATIONS (FEB 1988)

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are hereby incorporated by reference in this contract.

(End of clause)

27      52.222-14      DISPUTES CONCERNING LABOR STANDARDS (FEB 1988)

The United States Department of Labor has set forth in 29 CFR Parts 5, 6, and 7 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with those procedures and not the Disputes clause of this contract. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees of their representatives.

(End of clause)

28      52.222-15      CERTIFICATION OF ELIGIBILITY (FEB 1988)

(a) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(c) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(End of clause)

29      52.222-26      EQUAL OPPORTUNITY (APR 1984)

(a) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of \$10,000, the Contractor shall comply with subparagraphs (b)(1) through (11) below. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(b) During performing this contract, the Contractor agrees as follows:

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin.

(2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not be limited to, (i) employment, (ii) upgrading, (iii) demotion, (iv) transfer, (v) recruitment or recruitment advertising, (vi) layoff or termination, (vii) rates of pay or other forms of compensation, and (viii) selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.

(4) The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. Standard Form 100 (EEO-1), or any successor form, is the prescribed form to be filed within 30 days following the award, unless filed within 12 months preceding the date of award.

(8) The Contractor shall permit access to its books, records, and accounts by the contracting agency or the Office of Federal Contract Compliance Programs (OFCCP) for the purposes of investigation to ascertain the Contractor's compliance with the applicable rules, regulations, and orders.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended, the rules, regulations, and orders of the Secretary of Labor, or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of subparagraph (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.



(End of clause)  
(R 7-103.18 1978 SEP)  
(R 1-12.803-2)  
(R 7-607.13 1978 SEP)

30      52.222-27      AFFIRMATIVE ACTION COMPLIANCE REQUIREMENTS FOR CONSTRUCTION  
(APR 1984)

(a) Definitions.

"Covered area," as used in this clause, means the geographical area described in the solicitation for this contract.

"Director," as used in this clause, means Director, Office of Federal Contract Compliance Programs (OFCCP), United States Department of Labor, or any person to whom the Director delegates authority.

"Employer's identification number," as used in this clause, means the Federal Social Security number used on the employer's quarterly federal tax return, U.S. Treasury Department Form 941.

"Minority," as used in this clause, means--

(1) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

(2) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands);

(3) Black (all persons having origins in any of the black African racial groups not of Hispanic origin); and

(4) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race).

(b) If the Contractor, or a subcontractor at any tier, subcontracts a portion of the work involving any construction trade, each such subcontract in excess of \$10,000 shall include this clause and the Notice containing the goals for minority and female participation stated in the solicitation for this contract.

(c) If the Contractor is participating in a Hometown Plan (41 CFR 60-4) approved by the U.S. Department of Labor in a covered area, either individually or through an association, its affirmative action obligations on all work in the plan area (including goals) shall comply with the plan for those trades that have unions participating in the plan. Contractors must be able to demonstrate participation in, and compliance with, the provisions of the plan. Each Contractor or subcontractor participating in an approved plan is also required to comply with its obligations under the Equal Opportunity clause, and to make a good faith effort to achieve each goal under the plan in each trade in which it has employees. The overall good-faith performance by other Contractors or subcontractors toward a goal in an approved plan does not excuse any Contractor's or subcontractor's failure to make good-faith efforts to achieve the plan's goals.

(d) The Contractor shall implement the affirmative action procedures in subparagraphs (g)(1) through (16) of this clause. The goals stated in the solicitation for this contract are expressed as percentages of the total hours of employment and training of minority and female utilization that the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for the geographical area where that work is actually performed. The Contractor is expected to make substantially uniform progress toward its goals in each craft.

(e) Neither the terms and conditions of any collective bargaining

agreement, nor the failure by a union with which the Contractor has a collective bargaining agreement, to refer minorities or women shall excuse the Contractor's obligations under this clause, Executive Order 11246, as amended, or the regulations thereunder.

(f) In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

(g) The Contractor shall take affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with this clause shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and implement affirmative action steps at least as extensive as the following:

(1) Ensure a working environment free of harassment, intimidation, and coercion at all sites and in all facilities where the Contractor's employees are assigned to work. The Contractor, if possible, will assign two or more women to each construction project. The Contractor shall ensure that foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at these sites or facilities.

(2) Establish and maintain a current list of sources for minority and female recruitment. Provide written notification to minority and female recruitment sources and community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

(3) Establish and maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant, referrals of minorities or females from unions, recruitment sources, or community organizations, and the action taken with respect to each individual. If an individual was sent to the union hiring hall for referral and not referred back to the Contractor by the union or, if referred back, not employed by the Contractor, this shall be documented in the file, along with whatever additional actions the Contractor may have taken.

(4) Immediately notify the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred back to the Contractor a minority or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

(5) Develop on-the-job training opportunities and/or participate in training programs for the area that expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under subparagraph (g)(2) above.

(6) Disseminate the Contractor's equal employment policy by--

(i) Providing notice of the policy to unions and to training, recruitment, and outreach programs, and requesting their cooperation in assisting the Contractor in meeting its contract obligations;

(ii) Including the policy in any policy manual and in collective bargaining agreements;

(iii) Publicizing the policy in the company newspaper, annual report, etc.;

(iv) Reviewing the policy with all management personnel and with all

minority and female employees at least once a year; and

(v) Posting the policy on bulletin boards accessible to employees at each location where construction work is performed.

(7) Review, at least annually, the Contractor's equal employment policy and affirmative action obligations with all employees having responsibility for hiring, assignment, layoff, termination, or other employment decisions. Conduct review of this policy with all onsite supervisory personnel before initiating construction work at a job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

(8) Disseminate the Contractor's equal employment policy externally by including it in any advertising in the news media, specifically including minority and female news media. Provide written notification to, and discuss this policy with, other Contractors and subcontractors with which the Contractor does or anticipates doing business.

(9) Direct recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students, and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than 1 month before the date for acceptance of applications for apprenticeship or training by any recruitment source, send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

(10) Encourage present minority and female employees to recruit minority persons and women. Where reasonable, provide after-school, summer, and vacation employment to minority and female youth both on the site and in other areas of the Contractor's workforce.

(11) Validate all tests and other selection requirements where required under 41 CFR 60-3.

(12) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities. Encourage these employees to seek or to prepare for, through appropriate training, etc., opportunities for promotion.

(13) Ensure that seniority practices job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the Contractor's obligations under this contract are being carried out.

(14) Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

(15) Maintain a record of solicitations for subcontracts for minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

(16) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's equal employment policy and affirmative action obligations.

(h) The Contractor is encouraged to participate in voluntary associations that may assist in fulfilling one or more of the affirmative action obligations contained in subparagraphs (g)(1) through (16). The efforts of a contractor association, joint contractor-union, contractor-community, or similar group of which the contractor is a member and participant may be asserted as fulfilling one or more of its obligations under subparagraphs (g)(1) through (16), provided the Contractor--

(1) Actively participates in the group;

(2) Makes every effort to ensure that the group has a positive impact on the employment of minorities and women in the industry;

(3) Ensures that concrete benefits of the program are reflected in the Contractor's minority and female workforce participation;

(4) Makes a good-faith effort to meet its individual goals and timetables; and

(5) Can provide access to documentation that demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply is the Contractor's, and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

(i) A single goal for minorities and a separate single goal for women shall be established. The Contractor is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and nonminority. Consequently, the Contractor may be in violation of Executive Order 11246, as amended, if a particular group is employed in a substantially disparate manner.

(j) The Contractor shall not use goals or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

(k) The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts under Executive Order 11246, as amended.

(l) The Contractor shall carry out such sanctions and penalties for violation of this clause and of the Equal Opportunity clause, including suspension, termination, and cancellation of existing subcontracts, as may be imposed or ordered under Executive Order 11246, as amended, and its implementing regulations, by the OFCCP. Any failure to carry out these sanctions and penalties as ordered shall be a violation of this clause and Executive Order 11246, as amended.

(m) The Contractor in fulfilling its obligations under this clause shall implement affirmative action procedures at least as extensive as those prescribed in paragraph (g) above, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of Executive Order 11246, as amended, the implementing regulations, or this clause, the Director shall take action as prescribed in 41 CFR 60-4.8.

(n) The Contractor shall designate a responsible official to--

(1) Monitor all employment-related activity to ensure that the Contractor's equal employment policy is being carried out;

(2) Submit reports as may be required by the Government; and

(3) Keep records that shall at least include for each employee the name, address, telephone number, construction trade, union affiliation (if any), employee identification number, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, separate records are not required to be maintained.

(o) Nothing contained herein shall be construed as a limitation upon the application of other laws that establish different standards of compliance or upon the requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

(End of clause)

(R 7-603.60 1978 SEP)

(a) Definitions. As used in this clause--

"All employment openings" includes all positions except executive and top management, those positions that will be filled from within the contractor's organization, and positions lasting 3 days or less. This term includes full-time employment, temporary employment of more than 3 days' duration, and part-time employment.

"Appropriate office of the State employment service system" means the local office of the Federal-State national system of public employment offices with assigned responsibility to serve the area where the employment opening is to be filled, including the District of Columbia, Guam, the Commonwealth of Puerto Rico, and the Virgin Islands.

"Positions that will be filled from within the Contractor's organization" means employment openings for which no consideration will be given to persons outside the Contractor's organization (including any affiliates, subsidiaries, and parent companies) and includes any openings that the Contractor proposes to fill from regularly established "recall" lists. The exception does not apply to a particular opening once an employer decides to consider applicants outside of its organization.

"Veteran of the Vietnam era" means a person who--

(1) Served on active duty for a period of more than 180 days, any part of which occurred between August 5, 1964, and May 7, 1975, and was discharged or released therefrom with other than a dishonorable discharge; or

(2) Was discharged or released from active duty for a service-connected disability if any part of such active duty was performed between August 5, 1964, and May 7, 1975.

(b) General. (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against the individual because the individual is a disabled veteran or a veteran of the Vietnam era. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified disabled veterans and veterans of the Vietnam era without discrimination based upon their disability or veterans' status in all employment practices such as--

- (i) Employment;
- (ii) Upgrading;
- (iii) Demotion or transfer;
- (iv) Recruitment;
- (v) Advertising;
- (vi) Layoff or termination;
- (vii) Rates of pay or other forms of compensation; and
- (viii) Selection for training, including apprenticeship.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Vietnam Era Veterans' Readjustment Assistance Act of 1972 (the Act), as amended.

(c) Listing openings. (1) The Contractor agrees to list all employment openings existing at contract award or occurring during contract performance, at an appropriate office of the State employment service system in the locality where the opening occurs. These openings include those occurring at any Contractor facility, including one not connected with performing this contract. An independent corporate affiliate is exempt from this requirement.

(2) State and local government agencies holding Federal contracts of \$10,000 or more shall also list all employment openings with the

appropriate office of the State employment service.

(3) The listing of employment openings with the State employment service system is required at least concurrently with using any other recruitment source or effort and involves the obligations of placing a bona fide job order, including accepting referrals of veterans and nonveterans. This listing does not require hiring any particular job applicant or hiring from any particular group of job applicants and is not intended to relieve the Contractor from any requirements of Executive orders or regulations concerning nondiscrimination in employment.

(4) Whenever the Contractor becomes contractually bound to the listing terms of this clause, it shall advise the State employment service system, in each State where it has establishments, of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these terms and has so advised the State system, it need not advise the State system of subsequent contracts. The Contractor may advise the State system when it is no longer bound by this contract clause.

(d) Applicability. This clause does not apply to the listing of employment openings that occur and are filled outside the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, and the Virgin Islands.

(e) Postings. (1) The Contractor agrees to post employment notices stating (i) the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era, and (ii) the rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. They shall be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, Department of Labor (Deputy Assistant Secretary), and provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of the Act, and is committed to take affirmative action to employ, and advance in employment, qualified disabled veterans and veterans of the Vietnam era.

(f) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(g) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Deputy Assistant Secretary to enforce the terms, including action for noncompliance.

(End of clause)

32      52.222-36      AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (JUN 1998)

(a) General. (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against any employee or applicant because of physical or mental disability. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified individuals with disabilities without discrimination based upon their physical or mental disability in all employment practices such as--

- (i) Recruitment, advertising, and job application procedures;
- (ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff, and rehiring;
- (iii) Rates of pay or any other form of compensation and changes in compensation;
- (iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;
- (v) Leaves of absence, sick leave, or any other leave;
- (vi) Fringe benefits available by virtue of employment, whether or not administered by the Contractor;
- (vii) Selection and financial support for training, including apprenticeships, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;
- (viii) Activities sponsored by the Contractor, including social or recreational programs; and
- (ix) Any other term, condition, or privilege of employment.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Rehabilitation Act of 1973 (29 U.S.C. 793) (the Act), as amended.

(b) Postings. (1) The Contractor agrees to post employment notices stating--

(i) The Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified individuals with disabilities; and

(ii) The rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. The Contractor shall ensure that applicants and employees with disabilities are informed of the contents of the notice (e.g., the Contractor may have the notice read to a visually disabled individual, or may lower the posted notice so that it might be read by a person in a wheelchair). The notices shall be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance of the U.S. Department of Labor (Deputy Assistant Secretary) and shall be provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Section 503 of the Act and is committed to take affirmative action to employ, and advance in employment, qualified individuals with physical or mental disabilities.

(c) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(d) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order in excess of \$10,000 unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Deputy Assistant Secretary to enforce the terms, including action for noncompliance.

(End of clause)

(a) Unless the Contractor is a State or local government agency, the Contractor shall report at least annually, as required by the Secretary of Labor, on--

(1) The number of disabled veterans and the number of veterans of the Vietnam era in the workforce of the Contractor by job category and hiring location; and

(2) The total number of new employees hired during the period covered by the report, and of that total, the number of disabled veterans, and the number of veterans of the Vietnam era.

(b) The above items shall be reported by completing the form entitled "Federal Contractor Veterans' Employment Report VETS-100."

(c) Reports shall be submitted no later than March 31 of each year beginning March 31, 1988.

(d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. Contractors may select an ending date: (1) As of the end of any pay period during the period January through March 1st of the year the report is due, or (2) as of December 31, if the contractor has previous written approval from the Equal Employment Opportunity Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).

(e) The count of veterans reported according to paragraph (a) of this clause shall be based on voluntary disclosure. Each Contractor subject to the reporting requirements at 38 U.S.C. 4212 shall invite all disabled veterans and veterans of the Vietnam era who wish to benefit under the affirmative action program at 38 U.S.C. 4212 to identify themselves to the Contractor. The invitation shall state that the information is voluntarily provided; that the information will be kept confidential; that disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment; and that the information will be used only in accordance with the regulations promulgated under 38 U.S.C. 4212.

(f) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary.

(End of clause)

34 52.223-2 CLEAN AIR AND WATER (APR 1984)

(a) "Air Act", as used in this clause, means the Clean Air Act (42 U.S.C. 7401, et seq.).

"Clean air standards," as used in this clause, means--

(1) Any enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions, work practices, or other requirements contained in, issued under, or otherwise adopted under the Air Act or Executive Order 11738;

(2) An applicable implementation plan as described in section 110(d) of the Air Act (42 U.S.C. 7410(d));

(3) An approved implementation procedure or plan under section 111(c) or section 111(d) of the Air Act (42 U.S.C. 7411(c) or (d)); or

(4) An approved implementation procedure under section 112(d) of the Air Act (42 U.S.C. 7412(d)).

"Clean water standards," as used in this clause, means any enforceable limitation, control, condition, prohibition, standard, or other requirement promulgated under the Water Act or contained in a permit issued to a discharger by the EPA or by a State under an approved program, as authorized by section 402 of the Water Act (33 U.S.C. 1342), or by local government to ensure compliance with pretreatment regulations as required



by section 307 of the Water Act (33 U.S.C. 1317).

"Compliance," as used in this clause, means compliance with--

(1) Clean air or water standards; or

(2) A schedule or plan ordered or approved by a court of competent jurisdiction, the EPA, or an air or water pollution control agency under the requirements of the Air Act or Water Act and related regulations.

"Facility," as used in this clause, means any building, plant, installation, structure, mine, vessel or other floating craft, location, or site of operations, owned, leased, or supervised by a Contractor or subcontractor, used in the performance of a contract or subcontract. When a location or site of operations includes more than one building, plant, installation, or structure, the entire location or site shall be deemed a facility except when the Administrator, or a designee, of the EPA determines that independent facilities are collocated in one geographical area.

"Water Act," as used in this clause, means Clean Water Act (33 U.S.C. 1251, et seq.).

(b) The Contractor agrees--

(1) To comply with all the requirements of section 114 of the Clean Air Act (42 U.S.C. 7414) and section 308 of the Clean Water Act (33 U.S.C. 1318) relating to inspection, monitoring, entry, reports, and information, as well as other requirements specified in section 114 and section 308 of the Air Act and the Water Act, and all regulations and guidelines issued to implement those acts before the award of this contract;

(2) That no portion of the work required by this prime contract will be performed in a facility listed on the EPA List of Violating Facilities on the date when this contract was awarded unless and until the EPA eliminates the name of the facility from the listing;

(3) To use best efforts to comply with clean air standards and clean water standards at the facility in which the contract is being performed; and

(4) To insert the substance of this clause into any nonexempt subcontract, including this subparagraph (b)(4).

(End of clause)

(R 7-103.29 1975 OCT)

(R 1-1.2302)

35      52.223-5              POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION (APR 1998)

(a) Executive Order 12856 of August 3, 1993, requires Federal facilities to comply with the provisions of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11001-11050) and the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13101-13109).

(b) The Contractor shall provide all information needed by the Federal facility to comply with the emergency planning reporting requirements of Section 302 of EPCRA; the emergency notice requirements of Section 304 of EPCRA; the list of Material Data Safety Sheets required by Section 311 of EPCRA; the emergency and hazardous chemical inventory forms of Section 312 of EPCRA; the toxic chemical release inventory of Section 313 of EPCRA, which includes the reduction and recycling information required by Section 6607 of PPA; and the toxic chemical reduction goals requirements of Section 3-302 of Executive Order 12856.

(End of clause)

36      52.223-6              DRUG-FREE WORKPLACE (JAN 1997)

(a) Definitions. As used in this clause--

"Controlled substance" means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11 - 1308.15.

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes.

"Criminal drug statute" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession or use of any controlled substance.

"Drug-free workplace" means the site(s) for the performance of work done by the Contractor in connection with a specific contract at which employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

"Employee" means an employee of a Contractor directly engaged in the performance of work under a Government contract. "Directly engaged" is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

"Individual" means an offeror/contractor that has no more than one employee including the offeror/contractor.

(b) The Contractor, if other than an individual, shall--within 30 days after award (unless a longer period is agreed to in writing for contracts of 30 days or more performance duration), or as soon as possible for contracts of less than 30 days performance duration--

(1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish an ongoing drug-free awareness program to inform such employees about--

(i) The dangers of drug abuse in the workplace;

(ii) The Contractor's policy of maintaining a drug-free workplace;

(iii) Any available drug counseling, rehabilitation, and employee assistance programs; and

(iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

(3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b)(1) of this clause;

(4) Notify such employees in writing in the statement required by subparagraph (b)(1) of this clause that, as a condition of continued employment on this contract, the employee will--

(i) Abide by the terms of the statement; and

(ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 days after such conviction.

(5) Notify the Contracting Officer in writing within 10 days after receiving notice under subdivision (b)(4)(ii) of this clause, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee;

(6) Within 30 days after receiving notice under subdivision (b)(4)(ii) of this clause of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:

(i) Taking appropriate personnel action against such employee, up to and including termination; or

(ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other

appropriate agency, and

(7) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs (b)(1) through (b)(6) of this clause.

(c) The Contractor, if an individual, agrees by award of the contract or acceptance of a purchase order, not to engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance while performing this contract.

(d) In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraph (b) or (c) of this clause may, pursuant to FAR 23.506, render the Contractor subject to suspension of contract payments, termination of the contract for default, and suspension or debarment.

(End of clause)

37 52.223-14 TOXIC CHEMICAL RELEASE REPORTING (OCT 1996)

(a) Unless otherwise exempt, the Contractor, as owner or operator of a facility used in the performance of this contract, shall file by July 1 for the prior calendar year an annual Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023(a) and (g)), and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106). The Contractor shall file, for each facility subject to the Form R filing and reporting requirements, the annual Form R throughout the life of the contract.

(b) A Contractor owned or operated facility used in the performance of this contract is exempt from the requirement to file an annual Form R if--

(1) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

(2) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);

(3) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

(4) The facility does not fall within Standard Industrial Classification Code (SIC) designations 20 through 39 as set forth in Section 19.102 of the Federal Acquisition Regulation (FAR); or

(5) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

(c) If the Contractor has certified to an exemption in accordance with one or more of the criteria in paragraph (b) of this clause, and after award of the contract circumstances change so that any of its owned or operated facilities used in the performance of this contract is no longer exempt--

(1) The Contractor shall notify the Contracting Officer; and

(2) The Contractor, as owner or operator of a facility used in the performance of this contract that is no longer exempt, shall (i) submit a Toxic Chemical Release Inventory Form (Form R) on or before July 1 for the prior calendar year during which the facility becomes eligible; and (ii) continue to file the annual Form R for the life of the contract for such facility.

(d) The Contracting Officer may terminate this contract or take other action as appropriate, if the Contractor fails to comply accurately and fully with the EPCRA and PPA toxic chemical release filing and reporting

requirements.

(e) Except for acquisitions of commercial items as defined in FAR Part 2, the Contractor shall--

(1) For competitive subcontracts expected to exceed \$100,000 (including all options), include a solicitation provision substantially the same as the provision at FAR 52.223-13, Certification of Toxic Chemical Release Reporting; and

(2) Include in any resultant subcontract exceeding \$100,000 (including all options), the substance of this clause, except this paragraph (e).

(End of clause)

38 52.225-5 BUY AMERICAN ACT--CONSTRUCTION MATERIALS (JUN 1997)

(a) The Buy American Act (41 U.S.C. 10) provides that the Government give preference to domestic construction material.

"Components," means those articles, materials, and supplies incorporated directly into construction materials.

"Construction materials," means an article, material, or supply brought to the construction site for incorporation into the building or work. Construction material also includes an item brought to the site pre-assembled from articles, materials or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, which are discrete systems incorporated into a public building or work and which are produced as a complete system, shall be evaluated as a single and distinct construction material regardless of when or how the individual parts or components of such systems are delivered to the construction site.

"Domestic construction material," means (1) an unmanufactured construction material mined or produced in the United States, or (2) a construction material manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind as the construction materials determined to be unavailable pursuant to subparagraph 25.202(a)(2) of the Federal Acquisition Regulation (FAR) shall be treated as domestic.

(b)(1) The Buy American Act (41 U.S.C. 10a-10d) requires that only domestic construction material be used in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.

(2) This requirement does not apply to the excepted construction material or components listed by the Government as follows:

%%Insert list of applicable accepted materials or indicate "none"  
none

(3) Other foreign construction material may be added to the list in paragraph (b)(2) of this clause if the Government determines that--

(i) The cost would be unreasonable (the cost of a particular domestic construction material shall be determined to be unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent, unless the agency head determines a higher percentage to be appropriate);

(ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(4) The Contractor agrees that only domestic construction material will be used by the Contractor, subcontractors, material men, and suppliers in the performance of this contract, except for foreign construction materials, if any, listed in paragraph (b)(2) of this clause.

(c) Request for determination. (1) Contractors requesting to use foreign construction material under paragraph (b)(3) of this clause shall provide adequate information for Government evaluation of the request for a determination regarding the inapplicability of the Buy American Act. Each submission shall include a description of the foreign and domestic construction materials, including unit of measure, quantity, price, time of delivery or availability, location of the construction project, name and address of the proposed contractor, and a detailed justification of the reason for use of foreign materials cited in accordance with paragraph (b)(3) of this clause. A submission based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause. The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(2) If the Government determines after contract award that an exception to the Buy American Act applies, the contract shall be modified to allow use of the foreign construction material, and adequate consideration shall be negotiated. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration shall not be less than the differential established in paragraph (b)(3)(i) of this clause.

(3) If the Government does not determine that an exception to the Buy American Act applies, the use of that particular foreign construction material will be a failure to comply with the Act.

(d) For evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the following information and any applicable supporting data based on the survey of suppliers shall be included in the request:

Foreign and Domestic Construction Materials Price Comparison

-----			
Construction material description	Unit of measure	Quantity	Price (dollars) +
-----			
Item 1:			
Foreign construction material.....	.....	.....	.....
Domestic construction material.....	.....	.....	.....
Item 2:			
Foreign construction material.....	.....	.....	.....
Domestic construction material.....	.....	.....	.....
List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary. Include other applicable supporting information.			
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+ Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).

(End of clause)

39      52.227-1      AUTHORIZATION AND CONSENT (JUL 1995)

(a) The Government authorizes and consents to all use and manufacture, in performing this contract or any subcontract at any tier, of any invention described in and covered by a United States patent (1) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract or (2) used in machinery, tools, or methods whose use necessarily results from compliance by the Contractor or a subcontractor with (i) specifications or written provisions forming a part of this contract or (ii) specific written instructions given

by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clause, if any, included in this contract or any subcontract hereunder (including any lower-tier subcontract), and the Government assumes liability for all other infringement to the extent of the authorization and consent hereinabove granted.

require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for supplies or services (including construction, architect-engineer services, and materials, supplies, models, samples, and design or testing services expected to exceed the simplified acquisition threshold); however, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.

(End of clause)

40      52.227-2      NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT  
INFRINGEMENT (AUG 1996)

(a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.

(c) The Contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the simplified acquisition threshold at FAR 2.101.

(End of clause)

41      52.228-1      BID GUARANTEE (SEP 1996)

(a) Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.

(b) The bidder shall furnish a bid guarantee in the form of a firm commitment, e.g., bid bond supported by good and sufficient surety or sureties acceptable to the Government, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds, (1) to unsuccessful bidders as soon as practicable after the opening of bids, and (2) to the successful bidder upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted.

(c) The amount of the bid guarantee shall be 20 percent of the bid price or \$3,000,000.00, whichever is less.

(d) If the successful bidder, upon acceptance of its bid by the

Government within the period specified for acceptance, fails to execute all contractual documents or furnish executed bond(s) within 10 days after receipt of the forms by the bidder, the Contracting Officer may terminate the contract for default.

(e) In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

(End of provision)

42      52.228-2            ADDITIONAL BOND SECURITY (OCT 1997)

The Contractor shall promptly furnish additional security required to protect the Government and persons supplying labor or materials under this contract if--

(a) Any surety upon any bond, or issuing financial institution for other security, furnished with this contract becomes unacceptable to the Government;

(b) Any surety fails to furnish reports on its financial condition as required by the Government;

(c) The contract price is increased so that the penal sum of any bond becomes inadequate in the opinion of the Contracting Officer; or

(d) An irrevocable letter of credit (ILC) used as security will expire before the end of the period of required security. If the Contractor does not furnish an acceptable extension or replacement ILC, or other acceptable substitute, at least 30 days before an ILC's scheduled expiration, the Contracting officer has the right to immediately draw on the ILC.

(End of clause)

43      52.228-5            INSURANCE--WORK ON A GOVERNMENT INSTALLATION (JAN 1997)

(a) The Contractor shall, at its own expense, provide and maintain during the entire performance of this contract, at least the kinds and minimum amounts of insurance required in the Schedule or elsewhere in the contract.

(b) Before commencing work under this contract, the Contractor shall notify the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective (1) for such period as the laws of the State in which this contract is to be performed prescribe, or (2) until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

(c) The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

(End of clause)

44      52.228-11           PLEDGES OF ASSETS (FEB 1992)

(a) Offerors shall obtain from each person acting as an individual surety on a bid guarantee, a performance bond, or a payment bond--

- (1) Pledge of assets; and
  - (2) Standard Form 28, Affidavit of Individual Surety.
- (b) Pledges of assets from each person acting as an individual surety shall be in the form of--
- (1) Evidence of an escrow account containing cash, certificates of deposit, commercial or Government securities, or other assets described in FAR 28.203-2 (except see 28.203-2(b)(2) with respect to Government securities held in book entry form) and/or;
  - (2) A recorded lien on real estate. The offeror will be required to provide--
    - (i) Evidence of title in the form of a certificate of title prepared by a title insurance company approved by the United States Department of Justice. This title evidence must show fee simple title vested in the surety along with any concurrent owners; whether any real estate taxes are due and payable; and any recorded encumbrances against the property, including the lien filed in favor of the Government as required by FAR 28.203-3(d);
    - (ii) Evidence of the amount due under any encumbrance shown in the evidence of title;
    - (iii) A copy of the current real estate tax assessment of the property or a current appraisal dated no earlier than 6 months prior to the date of the bond, prepared by a professional appraiser who certifies that the appraisal has been conducted in accordance with the generally accepted appraisal standards as reflected in the Uniform Standards of Professional Appraisal Practice, as promulgated by the Appraisal Foundation.

(End of clause)

45      52.228-12      PROSPECTIVE SUBCONTRACTOR REQUESTS FOR BONDS (OCT 1995)

In accordance with Section 806(a)(3) of Pub. L. 102-190, as amended by Sections 2091 and 8105 of Pub. L. 103-355, upon the request of a prospective subcontractor or supplier offering to furnish labor or material for the performance of this contract for which a payment bond has been furnished to the Government pursuant to the Miller Act, the Contractor shall promptly provide a copy of such payment bond to the requester.

(End of clause)

46      52.228-14      IRREVOCABLE LETTER OF CREDIT (OCT 1997)

(a) "Irrevocable letter of credit" (ILC), as used in this clause, means a written commitment by a federally insured financial institution to pay all or part of a stated amount of money, until the expiration date of the letter, upon presentation by the Government (the beneficiary) of a written demand therefor. Neither the financial institution nor the offeror/Contractor can revoke or condition the letter of credit.

(b) If the offeror intends to use an ILC in lieu of a bid bond, or to secure other types of bonds such as performance and payment bonds, the letter of credit and letter of confirmation formats in paragraphs (e) and (f) of this clause shall be used.

(c) The letter of credit shall be irrevocable, shall require presentation of no document other than a written demand and the ILC (including confirming letter, if any), shall be issued/confirmed by an acceptable federally insured financial institution as provided in paragraph (d) of this clause, and--

(1) If used as a bid guarantee, the ILC shall expire no earlier than 60 days after the close of the bid acceptance period;

(2) If used as an alternative to corporate or individual sureties as



security for a performance or payment bond, the offeror/Contractor may submit an ILC with an initial expiration date estimated to cover the entire period for which financial security is required or may submit an ILC with an initial expiration date that is a minimum period of one year from the date of issuance. The ILC shall provide that, unless the issuer provides the beneficiary written notice of non-renewal at least 60 days in advance of the current expiration date, the ILC is automatically extended without amendment for one year from the expiration date, or any future expiration date, until the period of required coverage is completed and the Contracting Officer provides the financial institution with a written statement waiving the right to payment. The period of required coverage shall be:

- (i) For contracts subject to the Miller Act, the later of--
  - (A) One year following the expected date of final payment;
  - (B) For performance bonds only, until completion of any warranty period; or
  - (C) For payment bonds only, until resolution of all claims filed against the payment bond during the one-year period following final payment.
- (ii) For contracts not subject to the Miller Act, the later of--
  - (A) 90 days following final payment; or
  - (B) For performance bonds only, until completion of any warranty period.

(d) Only federally insured financial institutions rated investment grade or higher shall issue or confirm the ILC. The offeror/Contractor shall provide the Contracting Officer a credit rating that indicates the financial institution has the required rating(s) as of the date of issuance of the ILC. Unless the financial institution issuing the ILC had letter of credit business of at least \$25 million in the past year, ILCs over \$5 million must be confirmed by another acceptable financial institution that had letter of credit business of at least \$25 million in the past year.

(e) The following format shall be used by the issuing financial institution to create an ILC:

(Issuing Financial Institution's Letterhead or Name and Address)

Issue Date\_\_\_\_\_

Irrevocable Letter of Credit No. \_\_\_\_\_

Account party's name\_\_\_\_\_

Account party's address\_\_\_\_\_

For Solicitation No. \_\_\_\_\_

(For reference only)

TO: (U.S. Government agency)

(U.S. Government agency's address)

1. We hereby establish this irrevocable and transferable Letter of Credit in your favor for one or more drawings up to United States \$\_\_\_\_\_. This Letter of Credit is payable at (issuing financial institution's and, if any, confirming financial institution's) office at (issuing financial institution's address and, if any, confirming financial institution's address) and expires with our close of business on \_\_\_\_\_, or any automatically extended expiration date.

2. We hereby undertake to honor your or the transferee's sight draft(s) drawn on the issuing or, if any, the confirming financial institution, for all or any part of this credit if presented with this Letter of Credit and confirmation, if any, at the office specified in paragraph 1 of this Letter of Credit on or before the expiration date or any automatically extended expiration date.

3. (This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.) It is a condition of this Letter of Credit that it is deemed to be automatically extended without amendment for one year from the expiration date hereof, or any future expiration date, unless at least 60 days prior to any expiration date, we

notify you or the transferee by registered mail, or other receipted means of delivery, that we elect not to consider this Letter of Credit renewed for any such additional period. At the time we notify you, we also agree to notify the account party (and confirming financial institution, if any) by the same means of delivery.

4. This Letter of Credit is transferable. Transfers and assignments of proceeds are to be effected without charge to either the beneficiary or the transferee/assignee of proceeds. Such transfer or assignment shall be only at the written direction of the Government (the beneficiary) in a form satisfactory to the issuing financial institution and the confirming financial institution, if any.

5. This Letter of Credit is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of \_\_\_\_\_ (state of confirming financial institution, if any, otherwise state of issuing financial institution).

6. If this credit expires during an interruption of business of this financial institution as described in Article 17 of the UCP, the financial institution specifically agrees to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

(Issuing financial institution)

(f) The following format shall be used by the financial institution to confirm an ILC:

(Confirming Financial Institution's Letterhead or Name and Address)

Date \_\_\_\_\_ 19\_\_\_\_

Our Letter of Credit Advice Number \_\_\_\_\_

Beneficiary: \_\_\_\_\_

(U.S. Government agency)

Issuing Financial Institution: \_\_\_\_\_

Issuing Financial Institution's LC No.: \_\_\_\_\_

Gentlemen:

1. We hereby confirm the above indicated Letter of Credit, the original of which is attached, issued by \_\_\_\_\_ (name of issuing financial institution) for drawings of up to United States dollars \_\_\_\_\_/U.S. \$\_\_\_\_\_ and expiring with our close of business on \_\_\_\_\_ (the expiration date), or any automatically extended expiration date.

2. Draft(s) drawn under the Letter of Credit and this Confirmation are payable at our office located at \_\_\_\_\_.

3. We hereby undertake to honor sight draft(s) drawn under and presented with the Letter of Credit and this Confirmation at our offices as specified herein.

4. (This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.) It is a condition of this confirmation that it be deemed automatically extended without amendment for one year from the expiration date hereof, or any automatically extended expiration date, unless:

(a) At least 60 days prior to any such expiration date, we shall notify the Contracting Officer, or the transferee and the issuing financial institution, by registered mail or other receipted means of delivery, that we elect not to consider this confirmation extended for any such additional period; or

(b) The issuing financial institution shall have exercised its right to notify you or the transferee, the account party, and ourselves, of its election not to extend the expiration date of the Letter of Credit.

5. This confirmation is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent

therewith, to the laws of \_\_\_\_\_ (state of confirming financial institution).

6. If this confirmation expires during an interruption of business of this financial institution as described in Article 17 of the UCP, we specifically agree to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

(Confirming financial institution)

(g) The following format shall be used by the Contracting Officer for a sight draft to draw on the Letter of Credit:

SIGHT DRAFT

\_\_\_\_\_  
(City, State)

\_\_\_\_\_, 19\_\_\_\_

\_\_\_\_\_  
(Name and address of financial institution)

Pay to the order of \_\_\_\_\_

(Beneficiary Agency)

the sum of United States \$ \_\_\_\_\_

This draft is drawn under \_\_\_\_\_

Irrevocable Letter of Credit No. \_\_\_\_\_

By: \_\_\_\_\_

(Beneficiary Agency)

(End of clause)

47      52.228-15      Performance and Payment Bonds--Construction (SEP 1996)

(a) Definitions. As used in this clause--

Contract price means the award price of the contract or, for requirements contracts, the price payable for the estimated quantity; or for indefinite-delivery type contracts, the price payable for the specified minimum quantity.

(b) Unless the resulting contract price is \$100,000 or less, the successful offeror shall be required to furnish performance and payment bonds to the Contracting Officer as follows:

(1) Performance Bonds (Standard Form 25):

(i) The penal amount of performance bonds shall be 100 percent of the original contract price.

(ii) The Government may require additional performance bond protection when the contract price is increased. The increase in protection shall generally equal 100 percent of the increase in contract price.

(iii) The Government may secure additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(2) Payment Bonds (Standard Form 25-A):

(i) The penal amount of payment bonds shall equal--

(A) 50 percent of the contract price if the contract price is not more than \$1 million;

(B) 40 percent of the contract price if the contract price is more than \$1 million but not more than \$5 million; or

(C) \$2.5 million if the contract price is more than \$5 million.

(ii) If the original contract price is \$5 million or less, the Government may require additional protection if the contract price is increased. The subamount of the total protection shall meet the requirement of subparagraph (b)(2)(i) of this clause.

(iii) The Government may secure additional protection by directing the Contractor to increase the penal sum of the existing bond or to

obtain an additional bond.

(c) The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the Contracting Officer, but in any event, before starting work.

(d) The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the Federal Register, or may be obtained from the U.S. Department of Treasury, Financial Management Service, Surety Bond Branch, 401 14th Street, NW., 2nd Floor, West Wing, Washington, DC 20227.

(End of clause)

48      52.229-3      FEDERAL, STATE, AND LOCAL TAXES (JAN 1991)

(a) "Contract date," as used in this clause, means the date set for bid opening or, if this is a negotiated contract or a modification, the effective date of this contract or modification.

"All applicable Federal, State, and local taxes and duties," as used in this clause, means all taxes and duties, in effect on the contract date, that the taxing authority is imposing and collecting on the transactions or property covered by this contract.

"After-imposed Federal tax," as used in this clause, means any new or increased Federal excise tax or duty, or tax that was exempted or excluded on the contract date but whose exemption was later revoked or reduced during the contract period, on the transactions or property covered by this contract that the Contractor is required to pay or bear as the result of legislative, judicial, or administrative action taking effect after the contract date. It does not include social security tax or other employment taxes.

"After-relieved Federal tax," as used in this clause, means any amount of Federal excise tax or duty, except social security or other employment taxes, that would otherwise have been payable on the transactions or property covered by this contract, but which the Contractor is not required to pay or bear, or for which the Contractor obtains a refund or drawback, as the result of legislative, judicial, or administrative action taking effect after the contract date.

(b) The contract price includes all applicable Federal, State, and local taxes and duties.

(c) The contract price shall be increased by the amount of any after-imposed Federal tax, provided the Contractor warrants in writing that no amount for such newly imposed Federal excise tax or duty or rate increase was included in the contract price, as a contingency reserve or otherwise.

(d) The contract price shall be decreased by the amount of any after-relieved Federal tax.

(e) The contract price shall be decreased by the amount of any Federal excise tax or duty, except social security or other employment taxes, that the Contractor is required to pay or bear, or does not obtain a refund of, through the Contractor's fault, negligence, or failure to follow instructions of the Contracting Officer.

(f) No adjustment shall be made in the contract price under this clause unless the amount of the adjustment exceeds \$250.

(g) The Contractor shall promptly notify the Contracting Officer of all matters relating to any Federal excise tax or duty that reasonably may be expected to result in either an increase or decrease in the contract price

and shall take appropriate action as the Contracting Officer directs.

(h) The Government shall, without liability, furnish evidence appropriate to establish exemption from any Federal, State, or local tax when the Contractor requests such evidence and a reasonable basis exists to sustain the exemption.

(End of clause)

49      52.232-5              PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS (MAY 1997)

(a) Payment of price. The Government shall pay the Contractor the contract price as provided in this contract.

(b) Progress payments. The Government shall make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer.

(1) The Contractor's request for progress payments shall include the following substantiation:

(i) An itemization of the amounts requested, related to the various elements of work required by the contract covered by the payment requested.

(ii) A listing of the amount included for work performed by each subcontractor under the contract.

(iii) A listing of the total amount of each subcontract under the contract.

(iv) A listing of the amounts previously paid to each such subcontractor under the contract.

(v) Additional supporting data in a form and detail required by the Contracting Officer.

(2) In the preparation of estimates, the Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site also may be taken into consideration if--

(i) Consideration is specifically authorized by this contract; and

(ii) The Contractor furnishes satisfactory evidence that it has acquired title to such material and that the material will be used to perform this contract.

(c) Contractor certification. Along with each request for progress payments, the Contractor shall furnish the following certification, or payment shall not be made: (However, if the Contractor elects to delete paragraph (c)(4) from the certification, the certification is still acceptable.)

I hereby certify, to the best of my knowledge and belief, that--

(1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;

(2) Payments to subcontractors and suppliers have been made from previous payments received under the contract, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements and the requirements of chapter 39 of Title 31, United States Code;

(3) This request for progress payments does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of the subcontract; and

(4) This certification is not to be construed as final acceptance of a subcontractor's performance.

\_\_\_\_\_  
(Name)

(Title)

---

(Date)

(d) Refund of unearned amounts. If the Contractor, after making a certified request for progress payments, discovers that a portion or all of such request constitutes a payment for performance by the Contractor that fails to conform to the specifications, terms, and conditions of this contract (hereinafter referred to as the "unearned amount"), the Contractor shall--

(1) Notify the Contracting Officer of such performance deficiency; and

(2) Be obligated to pay the Government an amount (computed by the Contracting Officer in the manner provided in paragraph (j) of this clause) equal to interest on the unearned amount from the 8th day after the date of receipt of the unearned amount until--

(i) The date the Contractor notifies the Contracting Officer that the performance deficiency has been corrected; or

(ii) The date the Contractor reduces the amount of any subsequent certified request for progress payments by an amount equal to the unearned amount.

(e) Retainage. If the Contracting Officer finds that satisfactory progress was achieved during any period for which a progress payment is to be made, the Contracting Officer shall authorize payment to be made in full. However, if satisfactory progress has not been made, the Contracting Officer may retain a maximum of 10 percent of the amount of the payment until satisfactory progress is achieved. When the work is substantially complete, the Contracting Officer may retain from previously withheld funds and future progress payments that amount the Contracting Officer considers adequate for protection of the Government and shall release to the Contractor all the remaining withheld funds. Also, on completion and acceptance of each separate building, public work, or other division of the contract, for which the price is stated separately in the contract, payment shall be made for the completed work without retention of a percentage.

(f) Title, liability, and reservation of rights. All material and work covered by progress payments made shall, at the time of payment, become the sole property of the Government, but this shall not be construed as--

(1) Relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or

(2) Waiving the right of the Government to require the fulfillment of all of the terms of the contract.

(g) Reimbursement for bond premiums. In making these progress payments, the Government shall, upon request, reimburse the Contractor for the amount of premiums paid for performance and payment bonds (including coinsurance and reinsurance agreements, when applicable) after the Contractor has furnished evidence of full payment to the surety. The retainage provisions in paragraph (e) of this clause shall not apply to that portion of progress payments attributable to bond premiums.

(h) Final payment. The Government shall pay the amount due the Contractor under this contract after--

(1) Completion and acceptance of all work;

(2) Presentation of a properly executed voucher; and

(3) Presentation of release of all claims against the Government arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned under the Assignment of Claims Act of 1940 (31 U.S.C. 3727 and 41 U.S.C. 15).

(i) Limitation because of undefinitized work. Notwithstanding any provision of this contract, progress payments shall not exceed 80 percent

on work accomplished on undefinitized contract actions. A "contract action" is any action resulting in a contract, as defined in FAR Subpart 2.1, including contract modifications for additional supplies or services, but not including contract modifications that are within the scope and under the terms of the contract, such as contract modifications issued pursuant to the Changes clause, or funding and other administrative changes.

(j) Interest computation on unearned amounts. In accordance with 31 U.S.C. 3903(c)(1), the amount payable under subparagraph (d)(2) of this clause shall be--

(1) Computed at the rate of average bond equivalent rates of 91-day Treasury bills auctioned at the most recent auction of such bills prior to the date the Contractor receives the unearned amount; and

(2) Deducted from the next available payment to the Contractor.

(End of clause)

50      52.232-17      INTEREST (JUN 1996)

(a) Except as otherwise provided in this contract under a Price Reduction for Defective Cost or Pricing Data clause or a Cost Accounting Standards clause, all amounts that become payable by the Contractor to the Government under this contract (net of any applicable tax credit under the Internal Revenue Code (26 U.S.C. 1481)) shall bear simple interest from the date due until paid unless paid within 30 days of becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in Section 12 of the Contract Disputes Act of 1978 (Public Law 95-563), which is applicable to the period in which the amount becomes due, as provided in paragraph (b) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid.

(b) Amounts shall be due at the earliest of the following dates:

(1) The date fixed under this contract.

(2) The date of the first written demand for payment consistent with this contract, including any demand resulting from a default termination.

(3) The date the Government transmits to the Contractor a proposed supplemental agreement to confirm completed negotiations establishing the amount of debt.

(4) If this contract provides for revision of prices, the date of written notice to the Contractor stating the amount of refund payable in connection with a pricing proposal or a negotiated pricing agreement not confirmed by contract modification.

(c) The interest charge made under this clause may be reduced under the procedures prescribed in 32.614-2 of the Federal Acquisition Regulation in effect on the date of this contract.

(End of clause)

51      52.232-23      ASSIGNMENT OF CLAIMS (JAN 1986)

(a) The Contractor, under the Assignment of Claims Act, as amended, 31 U.S.C. 3727, 41 U.S.C. 15 (hereafter referred to as "the Act"), may assign its rights to be paid amounts due or to become due as a result of the performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency. The assignee under such an assignment may thereafter further assign or reassign its right under the original assignment to any type of financing institution described in the preceding sentence.

(b) Any assignment or reassignment authorized under the Act and this clause shall cover all unpaid amounts payable under this contract, and

shall not be made to more than one party, except that an assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in the financing of this contract.

(c) The Contractor shall not furnish or disclose to any assignee under this contract any classified document (including this contract) or information related to work under this contract until the Contracting Officer authorizes such action in writing.

(End of clause)

52      52.232-27      PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS (JUN 1997)

Notwithstanding any other payment terms in this contract, the Government will make invoice payments and contract financing payments under the terms and conditions specified in this clause. Payment shall be considered as being made on the day a check is dated or the date of an electronic funds transfer. Definitions of pertinent terms are set forth in section 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see subparagraph (a)(3) concerning payments due on Saturdays, Sundays, and legal holidays.)

(a) Invoice payments--

(1) Types of invoice payments. For purposes of this clause, there are several types of invoice payments that may occur under this contract, as follows:

(i) Progress payments, if provided for elsewhere in this contract, based on Contracting Officer approval of the estimated amount and value of work or services performed, including payments for reaching milestones in any project:

(A) The due date for making such payments shall be 14 days after receipt of the payment request by the designated billing office. If the designated billing office fails to annotate the payment request with the actual date of receipt at the time of receipt, the payment due date shall be the 14th day after the date of the Contractor's payment request, provided a proper payment request is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(B) The due date for payment of any amounts retained by the Contracting Officer in accordance with the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts, shall be as specified in the contract or, if not specified, 30 days after approval for release to the Contractor by the Contracting Officer.

(ii) Final payments based on completion and acceptance of all work and presentation of release of all claims against the Government arising by virtue of the contract, and payments for partial deliveries that have been accepted by the Government (e.g., each separate building, public work, or other division of the contract for which the price is stated separately in the contract):

(A) The due date for making such payments shall be either the 30th day after receipt by the designated billing office of a proper invoice from the Contractor, or the 30th day after Government acceptance of the work or services completed by the Contractor, whichever is later. If the designated billing office fails to annotate the invoice with the date of actual receipt at the time of receipt, the invoice payment due date shall be the 30th day after the date of the Contractor's invoice, provided a proper invoice is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(B) On a final invoice where the payment amount is subject to contract settlement actions (e.g., release of claims), acceptance shall be deemed to have occurred on the effective date of the contract



settlement.

(2) Contractor's invoice. The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in paragraphs (a)(2)(i) through (a)(2)(ix) of this clause. If the invoice does not comply with these requirements, it shall be returned within 7 days after the date the designated billing office received the invoice, with a statement of the reasons why it is not a proper invoice. Untimely notification will be taken into account in computing any interest penalty owed the Contractor in the manner described in subparagraph (a)(4) of this clause.

(i) Name and address of the Contractor.

(ii) Invoice date. (The Contractor is encouraged to date invoices as close as possible to the date of mailing or transmission.)

(iii) Contract number or other authorization for work or services performed (including order number and contract line item number).

(iv) Description of work or services performed.

(v) Delivery and payment terms (e.g., prompt payment discount terms).

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number, and mailing address of person to be notified in the event of a defective invoice.

(viii) For payments described in paragraph (a)(1)(i) of this clause, substantiation of the amounts requested and certification in accordance with the requirements of the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts.

(ix) Any other information or documentation required by the contract.

(x) While not required, the Contractor is strongly encouraged to assign an identification number to each invoice.

(3) Interest penalty. An interest penalty shall be paid automatically by the designated payment office, without request from the Contractor, if payment is not made by the due date and the conditions listed in paragraphs (a)(3)(i) through (a)(3)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day without incurring a late payment interest penalty.

(i) A proper invoice was received by the designated billing office.

(ii) A receiving report or other Government documentation authorizing payment was processed and there was no disagreement over quantity, quality, Contractor compliance with any contract term or condition, or requested progress payment amount.

(iii) In the case of a final invoice for any balance of funds due the Contractor for work or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(4) Computing penalty amount. The interest penalty shall be at the rate established by the Secretary of the Treasury under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) that is in effect on the day after the due date, except where the interest penalty is prescribed by other governmental authority (e.g., tariffs). This rate is referred to as the "Renegotiation Board Interest Rate," and it is published in the Federal Register semiannually on or about January 1 and July 1. The interest penalty shall accrue daily on the invoice principal payment amount approved by the Government until the payment date of such approved principal amount; and will be compounded in 30-day increments inclusive from the first day after the due date through the payment date. That is, interest accrued at the end of any 30-day period will be added to the approved invoice principal payment amount and will be subject to interest penalties if not paid in the succeeding 30-day period. If the designated

billing office failed to notify the Contractor of a defective invoice within the periods prescribed in subparagraph (a)(2) of this clause, the due date on the corrected invoice will be adjusted by subtracting from such date the number of days taken beyond the prescribed notification of defects period. Any interest penalty owed the Contractor will be based on this adjusted due date. Adjustments will be made by the designated payment office for errors in calculating interest penalties.

(i) For the sole purpose of computing an interest penalty that might be due the Contractor for payments described in paragraph (a)(1)(ii) of this clause, Government acceptance or approval shall be deemed to have occurred constructively on the 7th day after the Contractor has completed the work or services in accordance with the terms and conditions of the contract. In the event that actual acceptance or approval occurs within the constructive acceptance or approval period, the determination of an interest penalty shall be based on the actual date of acceptance or approval. Constructive acceptance or constructive approval requirements do not apply if there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. These requirements also do not compel Government officials to accept work or services, approve Contractor estimates, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The following periods of time will not be included in the determination of an interest penalty:

(A) The period taken to notify the Contractor of defects in invoices submitted to the Government, but this may not exceed 7 days.

(B) The period between the defects notice and resubmission of the corrected invoice by the Contractor.

(C) For incorrect electronic funds transfer (EFT) information, in accordance with the EFT clause of this contract.

(iii) Interest penalties will not continue to accrue after the filing of a claim for such penalties under the clause at 52.233-1, Disputes, or for more than 1 year. Interest penalties of less than \$1 need not be paid.

(iv) Interest penalties are not required on payment delays due to disagreement between the Government and the Contractor over the payment amount or other issues involving contract compliance, or on amounts temporarily withheld or retained in accordance with the terms of the contract. Claims involving disputes, and any interest that may be payable, will be resolved in accordance with the clause at 52.233-1, Disputes.

(5) Prompt payment discounts. An interest penalty also shall be paid automatically by the designated payment office, without request from the Contractor, if a discount for prompt payment is taken improperly. The interest penalty will be calculated on the amount of discount taken for the period beginning with the first day after the end of the discount period through the date when the Contractor is paid.

(6) Additional interest penalty.

(i) A penalty amount, calculated in accordance with subdivision (a)(6)(iii) of this clause, shall be paid in addition to the interest penalty amount if the Contractor--

(A) Is owed an interest penalty of \$1 or more;

(B) Is not paid the interest penalty within 10 days after the date the invoice amount is paid; and

(C) Makes a written demand to the designated payment office for additional penalty payment, in accordance with subdivision (a)(6)(ii) of this clause, postmarked not later than 40 days after the date the invoice amount is paid.

(ii)(A) Contractors shall support written demands for additional penalty payments with the following data. No additional data shall be

required. Contractors shall--

(1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;

(2) Attach a copy of the invoice on which the unpaid late payment interest was due; and

(3) State that payment of the principal has been received, including the date of receipt.

(B) Demands must be postmarked on or before the 40th day after payment was made, except that--

(1) If the postmark is illegible or nonexistent, the demand must have been received and annotated with the date of receipt by the designated payment office on or before the 40th day after payment was made; or

(2) If the postmark is illegible or nonexistent and the designated payment office fails to make the required annotation, the demand's validity will be determined by the date the Contractor has placed on the demand; provided such date is no later than the 40th day after payment was made.

(iii)(A) The additional penalty shall be equal to 100 percent of any original late payment interest penalty, except--

(1) The additional penalty shall not exceed \$5,000;

(2) The additional penalty shall never be less than \$25; and

(3) No additional penalty is owed if the amount of the underlying interest penalty is less than \$1.

(B) If the interest penalty ceases to accrue in accordance with the limits stated in subdivision (a)(4)(iii) of this clause, the amount of the additional penalty shall be calculated on the amount of interest penalty that would have accrued in the absence of these limits, subject to the overall limits on the additional penalty specified in subdivision (a)(6)(iii)(A) of this clause.

(C) For determining the maximum and minimum additional penalties, the test shall be the interest penalty due on each separate payment made for each separate contract. The maximum and minimum additional penalty shall not be based upon individual invoices unless the invoices are paid separately. Where payments are consolidated for disbursing purposes, the maximum and minimum additional penalty determination shall be made separately for each contract therein.

(D) The additional penalty does not apply to payments regulated by other Government regulations (e.g., payments under utility contracts subject to tariffs and regulation).

(b) Contract financing payments--

(1) Due dates for recurring financing payments. If this contract provides for contract financing, requests for payment shall be submitted to the designated billing office as specified in this contract or as directed by the Contracting Officer. Contract financing payments shall be made on the 30th day after receipt of a proper contract financing request by the designated billing office. In the event that an audit or other review of a specific financing request is required to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the due date specified.

(2) Due dates for other contract financing. For advance payments, loans, or other arrangements that do not involve recurring submissions of contract financing requests, payment shall be made in accordance with the corresponding contract terms or as directed by the Contracting Officer.

(3) Interest penalty not applicable. Contract financing payments shall not be assessed an interest penalty for payment delays.

(c) Subcontract clause requirements. The Contractor shall include in each subcontract for property or services (including a material supplier)

for the purpose of performing this contract the following:

(1) Prompt payment for subcontractors. A payment clause that obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract not later than 7 days from receipt of payment out of such amounts as are paid to the Contractor under this contract.

(2) Interest for subcontractors. An interest penalty clause that obligates the Contractor to pay to the subcontractor an interest penalty for each payment not made in accordance with the payment clause--

(i) For the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; and

(ii) Computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(3) Subcontractor clause flowdown. A clause requiring each subcontractor to include a payment clause and an interest penalty clause conforming to the standards set forth in subparagraphs (c)(1) and (c)(2) of this clause in each of its subcontracts, and to require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier.

(d) Subcontract clause interpretation. The clauses required by paragraph (c) of this clause shall not be construed to impair the right of the Contractor or a subcontractor at any tier to negotiate, and to include in their subcontract, provisions that--

(1) Retainage permitted. Permit the Contractor or a subcontractor to retain (without cause) a specified percentage of each progress payment otherwise due to a subcontractor for satisfactory performance under the subcontract without incurring any obligation to pay a late payment interest penalty, in accordance with terms and conditions agreed to by the parties to the subcontract, giving such recognition as the parties deem appropriate to the ability of a subcontractor to furnish a performance bond and a payment bond;

(2) Withholding permitted. Permit the Contractor or subcontractor to make a determination that part or all of the subcontractor's request for payment may be withheld in accordance with the subcontract agreement; and

(3) Withholding requirements. Permit such withholding without incurring any obligation to pay a late payment penalty if--

(i) A notice conforming to the standards of paragraph (g) of this clause previously has been furnished to the subcontractor; and

(ii) A copy of any notice issued by a Contractor pursuant to subdivision (d)(3)(i) of this clause has been furnished to the Contracting Officer.

(e) Subcontractor withholding procedures. If a Contractor, after making a request for payment to the Government but before making a payment to a subcontractor for the subcontractor's performance covered by the payment request, discovers that all or a portion of the payment otherwise due such subcontractor is subject to withholding from the subcontractor in accordance with the subcontract agreement, then the Contractor shall--

(1) Subcontractor notice. Furnish to the subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon ascertaining the cause giving rise to a withholding, but prior to the due date for subcontractor payment;

(2) Contracting Officer notice. Furnish to the Contracting Officer, as soon as practicable, a copy of the notice furnished to the subcontractor pursuant to subparagraph (e)(1) of this clause;

(3) Subcontractor progress payment reduction. Reduce the subcontractor's progress payment by an amount not to exceed the amount specified in the notice of withholding furnished under subparagraph

(e)(1) of this clause;

(4) Subsequent subcontractor payment. Pay the subcontractor as soon as practicable after the correction of the identified subcontract performance deficiency, and--

(i) Make such payment within--

(A) Seven days after correction of the identified subcontract performance deficiency (unless the funds therefor must be recovered from the Government because of a reduction under paragraph (e)(5)(i)) of this clause; or

(B) Seven days after the Contractor recovers such funds from the Government; or

(ii) Incur an obligation to pay a late payment interest penalty computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty;

(5) Notice to Contracting Officer. Notify the Contracting Officer upon--

(i) Reduction of the amount of any subsequent certified application for payment; or

(ii) Payment to the subcontractor of any withheld amounts of a progress payment, specifying--

(A) The amounts withheld under subparagraph (e)(1) of this clause; and

(B) The dates that such withholding began and ended; and

(6) Interest to Government. Be obligated to pay to the Government an amount equal to interest on the withheld payments (computed in the manner provided in 31 U.S.C. 3903(c)(1)), from the 8th day after receipt of the withheld amounts from the Government until--

(i) The day the identified subcontractor performance deficiency is corrected; or

(ii) The date that any subsequent payment is reduced under subdivision (e)(5)(i) of this clause.

(f) Third-party deficiency reports--

(1) Withholding from subcontractor. If a Contractor, after making payment to a first-tier subcontractor, receives from a supplier or subcontractor of the first-tier subcontractor (hereafter referred to as a "second-tier subcontractor") a written notice in accordance with section 2 of the Act of August 24, 1935 (40 U.S.C. 270b, Miller Act), asserting a deficiency in such first-tier subcontractor's performance under the contract for which the Contractor may be ultimately liable, and the Contractor determines that all or a portion of future payments otherwise due such first-tier subcontractor is subject to withholding in accordance with the subcontract agreement, the Contractor may, without incurring an obligation to pay an interest penalty under subparagraph (e)(6) of this clause--

(i) Furnish to the first-tier subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon making such determination; and

(ii) Withhold from the first-tier subcontractor's next available progress payment or payments an amount not to exceed the amount specified in the notice of withholding furnished under paragraph (f)(1)(i) of this clause.

(2) Subsequent payment or interest charge. As soon as practicable, but not later than 7 days after receipt of satisfactory written notification that the identified subcontract performance deficiency has been corrected, the Contractor shall--

(i) Pay the amount withheld under paragraph (f)(1)(ii) of this clause to such first-tier subcontractor; or

(ii) Incur an obligation to pay a late payment interest penalty to such first-tier subcontractor computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(g) Written notice of subcontractor withholding. A written notice of any withholding shall be issued to a subcontractor (with a copy to the Contracting Officer of any such notice issued by the Contractor), specifying--

(1) The amount to be withheld;

(2) The specific causes for the withholding under the terms of the subcontract; and

(3) The remedial actions to be taken by the subcontractor in order to receive payment of the amounts withheld.

(h) Subcontractor payment entitlement. The Contractor may not request payment from the Government of any amount withheld or retained in accordance with paragraph (d) of this clause until such time as the Contractor has determined and certified to the Contracting Officer that the subcontractor is entitled to the payment of such amount.

(i) Prime-subcontractor disputes. A dispute between the Contractor and subcontractor relating to the amount or entitlement of a subcontractor to a payment or a late payment interest penalty under a clause included in the subcontract pursuant to paragraph (c) of this clause does not constitute a dispute to which the United States is a party. The United States may not be interpleaded in any judicial or administrative proceeding involving such a dispute.

(j) Preservation of prime-subcontractor rights. Except as provided in paragraph (i) of this clause, this clause shall not limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or a subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor or deficient subcontract performance or nonperformance by a subcontractor.

(k) Non-recourse for prime contractor interest penalty. The Contractor's obligation to pay an interest penalty to a subcontractor pursuant to the clauses included in a subcontract under paragraph (c) of this clause shall not be construed to be an obligation of the United States for such interest penalty. A cost-reimbursement claim may not include any amount for reimbursement of such interest penalty.

(End of clause)

53      52.233-1      DISPUTES (OCT 1995)

(a) This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. A claim arising under a contract, unlike a claim relating to that contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding \$100,000 is not a claim under the Act until certified as required by subparagraph (d)(2) of this clause. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with

the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

(d)(1) A claim by the Contractor shall be made in writing and, unless otherwise stated in this contract, submitted within 6 years after accrual of the claim to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.

(2)(i) Contractors shall provide the certification specified in subparagraph (d)(2)(iii) of this clause when submitting any claim--

(A) Exceeding \$100,000; or

(B) Regardless of the amount claimed, when using--

(1) Arbitration conducted pursuant to 5 U.S.C. 575-580; or

(2) Any other alternative means of dispute resolution (ADR) technique that the agency elects to handle in accordance with the Administrative Dispute Resolution Act (ADRA).

(ii) The certification requirement does not apply to issues in controversy that have not been submitted as all or part of a claim.

(iii) The certification shall state as follows:

"I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the Contractor."

(3) The certification may be executed by any person duly authorized to bind the Contractor with respect to the claim.

(e) For Contractor claims of \$100,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over \$100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

(f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.

(g) If the claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented to the Contractor, the parties, by mutual consent, may agree to use ADR. If the Contractor refuses an offer for alternative disputes resolution, the Contractor shall inform the Contracting Officer, in writing, of the Contractor's specific reasons for rejecting the request. When using arbitration conducted pursuant to 5 U.S.C. 575-580, or when using any other ADR technique that the agency elects to handle in accordance with the ADRA, any claim, regardless of amount, shall be accompanied by the certification described in subparagraph (d)(2)(iii) of this clause, and executed in accordance with subparagraph (d)(3) of this clause.

(h) The Government shall pay interest on the amount found due and unpaid from (1) the date that the Contracting Officer receives the claim (certified, if required); or (2) the date that payment otherwise would be due, if that date is later, until the date of payment. With regard to claims having defective certifications, as defined in (FAR) 48 CFR 33.201, interest shall be paid from the date that the Contracting Officer initially receives the claim. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

(i) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

(End of clause)

(a) Upon receipt of a notice of protest (as defined in FAR 33.101) or a determination that a protest is likely (see FAR 33.102(d)), the Contracting Officer may, by written order to the Contractor, direct the Contractor to stop performance of the work called for by this contract. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Upon receipt of the final decision in the protest, the Contracting Officer shall either--

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled either before or after a final decision in the protest, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if--

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to an adjustment within 30 days after the end of the period of work stoppage; provided, that if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon a proposal at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

(e) The Government's rights to terminate this contract at any time are not affected by action taken under this clause.

(f) If, as the result of the Contractor's intentional or negligent misstatement, misrepresentation, or miscertification, a protest related to this contract is sustained, and the Government pays costs, as provided in FAR 33.102(b)(2) or 33.104(h)(1), the Government may require the Contractor to reimburse the Government the amount of such costs. In addition to any other remedy available, and pursuant to the requirements of Subpart 32.6, the Government may collect this debt by offsetting the amount against any payment due the Contractor under any contract between the Contractor and the Government.

(End of clause)

(a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or (2) unknown physical conditions at the site, of an unusual nature, which differ



materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.

(b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the contract modified in writing accordingly.

(c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in (a) above for giving written notice may be extended by the Contracting Officer.

(d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

(End of clause)

56      52.236-3      SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK (APR 1984)

(a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and roads; (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government.

(b) The Government assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Government. Nor does the Government assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

(End of clause)

57      52.236-5      MATERIAL AND WORKMANSHIP (APR 1984)

(a) All equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the specifications to equipment, material,

articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.

(b) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the machinery and mechanical and other equipment. When required by this contract or by the Contracting Officer, the Contractor shall also obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. When directed to do so, the Contractor shall submit samples for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

(c) All work under this contract shall be performed in a skillful and workmanlike manner. The Contracting Officer may require, in writing, that the Contractor remove from the work any employee the Contracting Officer deems incompetent, careless, or otherwise objectionable.

(End of clause)  
(R 7-602.9 1964 JUN)

58      52.236-6              SUPERINTENDENCE BY THE CONTRACTOR (APR 1984)

At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the work site a competent superintendent who is satisfactory to the Contracting Officer and has authority to act for the Contractor.

(End of clause)

59      52.236-7              PERMITS AND RESPONSIBILITIES (NOV 1991)

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

(End of clause)

60      52.236-8              OTHER CONTRACTS (APR 1984)

The Government may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with Government employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any

direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by Government employees.  
(End of clause)

61      52.236-9      PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT,  
UTILITIES, AND IMPROVEMENTS (APR 1984)

(a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.

(b) The Contractor shall protect from damage all existing improvements and utilities (1) at or near the work site, and (2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

(End of clause)

62      52.236-10      OPERATIONS AND STORAGE AREAS (APR 1984)

(a) The Contractor shall confine all operations (including storage of materials) on Government premises to areas authorized or approved by the Contracting Officer. The Contractor shall hold and save the Government, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance.

(b) Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the Contractor only with the approval of the Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the Government. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Officer, the buildings and utilities may be abandoned and need not be removed.

(c) The Contractor shall, under regulations prescribed by the Contracting Officer, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

(End of clause)

(a) The Government shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the Government intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The Government's possession or use shall not be deemed an acceptance of any work under the contract.

(b) While the Government has such possession or use, the Contractor shall be relieved of the responsibility for the loss of or damage to the work resulting from the Government's possession or use, notwithstanding the terms of the clause in this contract entitled "Permits and Responsibilities." If prior possession or use by the Government delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

(End of clause)

The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the Contractor shall remove from the work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the Government. Upon completing the work, the Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer.

(End of clause)

(a) The Contractor shall provide and maintain work environments and procedures which will (1) safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities; (2) avoid interruptions of Government operations and delays in project completion dates; and (3) control costs in the performance of this contract.

(b) For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the Contractor shall--

- (1) Provide appropriate safety barricades, signs, and signal lights;
- (2) Comply with the standards issued by the Secretary of Labor at 29 CFR Part 1926 and 29 CFR Part 1910; and

- (3) Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for the purposes are taken.

(c) If this contract is for construction or dismantling, demolition or removal of improvements with any Department of Defense agency or component, the Contractor shall comply with all pertinent provisions of the latest version of U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, in effect on the date of the solicitation.

(d) Whenever the Contracting Officer becomes aware of any noncompliance with these requirements or any condition which poses a serious or imminent danger to the health or safety of the public or Government personnel, the Contracting Officer shall notify the Contractor orally, with written confirmation, and request immediate initiation of corrective action. This

notice, when delivered to the Contractor or the Contractor's representative at the work site, shall be deemed sufficient notice of the noncompliance and that corrective action is required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any stop work order issued under this clause.

(e) The Contractor shall insert this clause, including this paragraph (e), with appropriate changes in the designation of the parties, in subcontracts.

(End of clause)

66      52.236-15      SCHEDULES FOR CONSTRUCTION CONTRACTS (APR 1984)

(a) The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments until the Contractor submits the required schedule.

(b) The Contractor shall enter the actual progress on the chart as directed by the Contracting Officer, and upon doing so shall immediately deliver three copies of the annotated schedule to the Contracting Officer. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the Government. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.

(c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this contract.

(End of clause)

67      52.236-21      SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FEB 1997)

(a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the

drawings, or in the specifications, the matter shall be promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.

(b) Wherever in the specifications or upon the drawings the words "directed", "required", "ordered", "designated", "prescribed", or words of like import are used, it shall be understood that the "direction", "requirement", "order", "designation", or "prescription", of the Contracting Officer is intended and similarly the words "approved", "acceptable", "satisfactory", or words of like import shall mean "approved by", or "acceptable to", or "satisfactory to" the Contracting Officer, unless otherwise expressly stated.

(c) Where "as shown," "as indicated", "as detailed", or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provide complete in place," that is "furnished and installed".

(d) Shop drawings means drawings, submitted to the Government by the Contractor, subcontractor, or any lower tier subcontractor pursuant to a construction contract, showing in detail (1) the proposed fabrication and assembly of structural elements, and (2) the installation (i.e., fit, and attachment details) of materials or equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the contractor to explain in detail specific portions of the work required by the contract. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the Government's reasons therefor. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.

(f) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Contracting Officer approves any such variation, the Contracting Officer shall issue an appropriate contract modification, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued.

(g) The Contractor shall submit to the Contracting Officer for approval four copies (unless otherwise indicated) of all shop drawings as called for under the various headings of these specifications. Three sets (unless otherwise indicated) of all shop drawings, will be retained by the Contracting Officer and one set will be returned to the Contractor.

(End of clause)

If the Contracting Officer decides to conduct a preconstruction conference, the successful offeror will be notified and will be required to attend. The Contracting Officer's notification will include specific details regarding the date, time, and location of the conference, any need for attendance by subcontractors, and information regarding the items to be discussed.

(End of clause)

69      52.242-13      BANKRUPTCY (JUL 1995)

In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish, by certified mail or electronic commerce method authorized by the contract, written notification of the bankruptcy to the Contracting Officer responsible for administering the contract. This notification shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of Government contract numbers and contracting offices for all Government contracts against which final payment has not been made. This obligation remains in effect until final payment under this contract.

(End of clause)

70      52.242-14      SUSPENSION OF WORK (APR 1984)

(a) The Contracting Officer may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the Government.

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract.

(c) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order), and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

(End of clause)

71      52.243-4      CHANGES (AUG 1987)

(a) The Contracting Officer may, at any time, without notice to the

sureties, if any, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract, including changes--

- (1) In the specifications (including drawings and designs);
- (2) In the method or manner of performance of the work;
- (3) In the Government-furnished facilities, equipment, materials, services, or site; or
- (4) Directing acceleration in the performance of the work.

(b) Any other written or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Contracting Officer that causes a change shall be treated as a change order under this clause; provided, that the Contractor gives the Contracting Officer written notice stating (1) the date, circumstances, and source of the order and (2) that the Contractor regards the order as a change order.

(c) Except as provided in this clause, no order, statement, or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.

(d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any such order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing. However, except for an adjustment based on defective specifications, no adjustment for any change under paragraph (b) of this clause shall be made for any costs incurred more than 20 days before the Contractor gives written notice as required. In the case of defective specifications for which the Government is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.

(e) The Contractor must assert its right to an adjustment under this clause within 30 days after (1) receipt of a written change order under paragraph (a) of this clause or (2) the furnishing of a written notice under paragraph (b) of this clause, by submitting to the Contracting Officer a written statement describing the general nature and amount of the proposal, unless this period is extended by the Government. The statement of proposal for adjustment may be included in the notice under paragraph (b) above.

(f) No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.

(End of clause)

72      52.246-12      INSPECTION OF CONSTRUCTION (AUG 1996)

(a) Definition. "Work" includes, but is not limited to, materials, workmanship, and manufacture and fabrication of components.

(b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Government. All work shall be conducted under the general direction of the Contracting Officer and is subject to Government inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.

(c) Government inspections and tests are for the sole benefit of the Government and do not--

- (1) Relieve the Contractor of responsibility for providing adequate quality control measures;
- (2) Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;



(3) Constitute or imply acceptance; or

(4) Affect the continuing rights of the Government after acceptance of the completed work under paragraph (i) below.

(d) The presence or absence of a Government inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specification without the Contracting Officer's written authorization.

(e) The Contractor shall promptly furnish, at no increase in contract price, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The Government may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The Government shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.

(f) The Contractor shall, without charge, replace or correct work found by the Government not to conform to contract requirements, unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

(g) If the Contractor does not promptly replace or correct rejected work, the Government may (1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor or (2) terminate for default the Contractor's right to proceed.

(h) If, before acceptance of the entire work, the Government decides to examine already completed work by removing it or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material. If the work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet contract requirements, the Contracting Officer shall make an equitable adjustment for the additional services involved in the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.

(i) Unless otherwise specified in the contract, the Government shall accept, as promptly as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the Government's rights under any warranty or guarantee.

(End of clause)

72      52.248-3      VALUE ENGINEERING--CONSTRUCTION (MAR 1989)

(a) General. The Contractor is encouraged to develop, prepare, and submit value engineering change proposals (VECP's) voluntarily. The Contractor shall share in any instant contract savings realized from accepted VECP's, in accordance with paragraph (f) below.

(b) Definitions. "Collateral costs," as used in this clause, means agency costs of operation, maintenance, logistic support, or Government-furnished property.

"Collateral savings," as used in this clause, means those measurable net reductions resulting from a VECP in the agency's overall projected collateral costs, exclusive of acquisition savings, whether or not the acquisition cost changes.

"Contractor's development and implementation costs," as used in this

clause, means those costs the Contractor incurs on a VECP specifically in developing, testing, preparing, and submitting the VECP, as well as those costs the Contractor incurs to make the contractual changes required by Government acceptance of a VECP.

"Government costs," as used in this clause, means those agency costs that result directly from developing and implementing the VECP, such as any net increases in the cost of testing, operations, maintenance, and logistic support. The term does not include the normal administrative costs of processing the VECP.

"Instant contract savings," as used in this clause, means the estimated reduction in Contractor cost of performance resulting from acceptance of the VECP, minus allowable Contractor's development and implementation costs, including subcontractors' development and implementation costs (see paragraph (h) below).

"Value engineering change proposal (VECP)" means a proposal that--

- (1) Requires a change to this, the instant contract, to implement; and
- (2) Results in reducing the contract price or estimated cost without impairing essential functions or characteristics; provided, that it does not involve a change--
  - (i) In deliverable end item quantities only; or
  - (ii) To the contract type only.

(c) VECP preparation. As a minimum, the Contractor shall include in each VECP the information described in subparagraphs (1) through (7) below. If the proposed change is affected by contractually required configuration management or similar procedures, the instructions in those procedures relating to format, identification, and priority assignment shall govern VECP preparation. The VECP shall include the following:

- (1) A description of the difference between the existing contract requirement and that proposed, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, and the effect of the change on the end item's performance.
- (2) A list and analysis of the contract requirements that must be changed if the VECP is accepted, including any suggested specification revisions.
- (3) A separate, detailed cost estimate for (i) the affected portions of the existing contract requirement and (ii) the VECP. The cost reduction associated with the VECP shall take into account the Contractor's allowable development and implementation costs, including any amount attributable to subcontracts under paragraph (h) below.
- (4) A description and estimate of costs the Government may incur in implementing the VECP, such as test and evaluation and operating and support costs.
- (5) A prediction of any effects the proposed change would have on collateral costs to the agency.
- (6) A statement of the time by which a contract modification accepting the VECP must be issued in order to achieve the maximum cost reduction, noting any effect on the contract completion time or delivery schedule.
- (7) Identification of any previous submissions of the VECP, including the dates submitted, the agencies and contract numbers involved, and previous Government actions, if known.

(d) Submission. The Contractor shall submit VECP's to the Resident Engineer at the worksite, with a copy to the Contracting Officer.

(e) Government action. (1) The Contracting Officer shall notify the Contractor of the status of the VECP within 45 calendar days after the contracting office receives it. If additional time is required, the Contracting Officer shall notify the Contractor within the 45-day period and provide the reason for the delay and the expected date of the decision. The Government will process VECP's expeditiously; however, it shall not be liable for any delay in acting upon a VECP.

(2) If the VECP is not accepted, the Contracting Officer shall notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by the Government. The Contracting Officer may require that the Contractor provide written notification before undertaking significant expenditures for VECP effort.

(3) Any VECP may be accepted, in whole or in part, by the Contracting Officer's award of a modification to this contract citing this clause. The Contracting Officer may accept the VECP, even though an agreement on price reduction has not been reached, by issuing the Contractor a notice to proceed with the change. Until a notice to proceed is issued or a contract modification applies a VECP to this contract, the Contractor shall perform in accordance with the existing contract. The Contracting Officer's decision to accept or reject all or part of any VECP shall be final and not subject to the Disputes clause or otherwise subject to litigation under the Contract Disputes Act of 1978 (41 U.S.C. 601-613).

(f) Sharing. (1) Rates. The Government's share of savings is determined by subtracting Government costs from instant contract savings and multiplying the result by (i) 45 percent for fixed-price contracts or (ii) 75 percent for cost-reimbursement contracts.

(2) Payment. Payment of any share due the Contractor for use of a VECP on this contract shall be authorized by a modification to this contract to--

- (i) Accept the VECP;
- (ii) Reduce the contract price or estimated cost by the amount of instant contract savings; and
- (iii) Provide the Contractor's share of savings by adding the amount calculated to the contract price or fee.

(g) Collateral savings. If a VECP is accepted, the instant contract amount shall be increased by 20 percent of any projected collateral savings determined to be realized in a typical year of use after subtracting any Government costs not previously offset. However, the Contractor's share of collateral savings shall not exceed (1) the contract's firm-fixed-price or estimated cost, at the time the VECP is accepted, or (2) \$100,000, whichever is greater. The Contracting Officer shall be the sole determiner of the amount of collateral savings, and that amount shall not be subject to the Disputes clause or otherwise subject to litigation under 41 U.S.C. 601-613.

(h) Subcontracts. The Contractor shall include an appropriate value engineering clause in any subcontract of \$50,000 or more and may include one in subcontracts of lesser value. In computing any adjustment in this contract's price under paragraph (f) above, the Contractor's allowable development and implementation costs shall include any subcontractor's allowable development and implementation costs clearly resulting from a VECP accepted by the Government under this contract, but shall exclude any value engineering incentive payments to a subcontractor. The Contractor may choose any arrangement for subcontractor value engineering incentive payments; provided, that these payments shall not reduce the Government's share of the savings resulting from the VECP.

(i) Data. The Contractor may restrict the Government's right to use any part of a VECP or the supporting data by marking the following legend on the affected parts:

"These data, furnished under the Value Engineering--Construction clause of contract \_\_\_\_\_, shall not be disclosed outside the Government or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering change proposal submitted under the clause. This restriction does not limit the Government's right to use information contained in these data if it has been obtained or is otherwise available from the Contractor or from another source without limitations."

If a VECP is accepted, the Contractor hereby grants the Government unlimited rights in the VECP and supporting data, except that, with respect to data qualifying and submitted as limited rights technical data, the Government shall have the rights specified in the contract modification implementing the VECP and shall appropriately mark the data. (The terms "unlimited rights" and "limited rights" are defined in Part 27 of the Federal Acquisition Regulation.)

(End of clause)

74 52.249-2 I TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE)  
(SEP 1996)-- ALTERNATE I (SEP 1996)

(a) The Government may terminate performance of work under this contract in whole or, from time to time, in part if the Contracting Officer determines that a termination is in the Government's interest. The Contracting Officer shall terminate by delivering to the Contractor a Notice of Termination specifying the extent of termination and the effective date.

(b) After receipt of a Notice of Termination, and except as directed by the Contracting Officer, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due under this clause:

(1) Stop work as specified in the notice.

(2) Place no further subcontracts or orders (referred to as subcontracts in this clause) for materials, services, or facilities, except as necessary to complete the continued portion of the contract.

(3) Terminate all subcontracts to the extent they relate to the work terminated.

(4) Assign to the Government, as directed by the Contracting Officer, all right, title, and interest of the Contractor under the subcontracts terminated, in which case the Government shall have the right to settle or to pay any termination settlement proposal arising out of those terminations.

(5) With approval or ratification to the extent required by the Contracting Officer, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts; the approval or ratification will be final for purposes of this clause.

(6) As directed by the Contracting Officer, transfer title and deliver to the Government (i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced or acquired for the work terminated, and (ii) the completed or partially completed plans, drawings, information, and other property that, if the contract had been completed, would be required to be furnished to the Government.

(7) Complete performance of the work not terminated.

(8) Take any action that may be necessary, or that the Contracting Officer may direct, for the protection and preservation of the property related to this contract that is in the possession of the Contractor and in which the Government has or may acquire an interest.

(9) Use its best efforts to sell, as directed or authorized by the Contracting Officer, any property of the types referred to in subparagraph (b)(6) of this clause; provided, however, that the Contractor (i) is not required to extend credit to any purchaser and (ii) may acquire the property under the conditions prescribed by, and at prices approved by, the Contracting Officer. The proceeds of any transfer or disposition will be applied to reduce any payments to be made by the Government under this contract, credited to the price or cost of the work, or paid in any other manner directed by the Contracting Officer.

(c) The Contractor shall submit complete termination inventory schedules no later than 120 days from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 120-day period.

(d) After expiration of the plant clearance period as defined in Subpart 45.6 of the Federal Acquisition Regulation, the Contractor may submit to the Contracting Officer a list, certified as to quantity and quality, of termination inventory not previously disposed of, excluding items authorized for disposition by the Contracting Officer. The Contractor may request the Government to remove those items or enter into an agreement for their storage. Within 15 days, the Government will accept title to those items and remove them or enter into a storage agreement. The Contracting Officer may verify the list upon removal of the items, or if stored, within 45 days from submission of the list, and shall correct the list, as necessary, before final settlement.

(e) After termination, the Contractor shall submit a final termination settlement proposal to the Contracting Officer in the form and with the certification prescribed by the Contracting Officer. The Contractor shall submit the proposal promptly, but no later than 1 year from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 1 year period. However, if the Contracting Officer determines that the facts justify it, a termination settlement proposal may be received and acted on after 1 year or any extension. If the Contractor fails to submit the proposal within the time allowed, the Contracting Officer may determine, on the basis of information available, the amount, if any, due the Contractor because of the termination and shall pay the amount determined.

(f) Subject to paragraph (e) of this clause, the Contractor and the Contracting Officer may agree upon the whole or any part of the amount to be paid or remaining to be paid because of the termination. The amount may include a reasonable allowance for profit on work done. However, the agreed amount, whether under this paragraph (f) or paragraph (g) of this clause, exclusive of costs shown in subparagraph (g)(3) of this clause, may not exceed the total contract price as reduced by (1) the amount of payments previously made and (2) the contract price of work not terminated. The contract shall be modified, and the Contractor paid the agreed amount. Paragraph (g) of this clause shall not limit, restrict, or affect the amount that may be agreed upon to be paid under this paragraph.

(g) If the Contractor and Contracting Officer fail to agree on the whole amount to be paid the Contractor because of the termination of work, the Contracting Officer shall pay the Contractor the amounts determined as follows, but without duplication of any amounts agreed upon under paragraph (f) of this clause:

(1) For contract work performed before the effective date of termination, the total (without duplication of any items) of--

(i) The cost of this work;

(ii) The cost of settling and paying termination settlement proposals under terminated subcontracts that are properly chargeable to the terminated portion of the contract if not included in subdivision (g)(1)(i) of this clause; and

(iii) A sum, as profit on subdivision (g)(1)(i) of this clause, determined by the Contracting Officer under 49.202 of the Federal Acquisition Regulation, in effect on the date of this contract, to be fair and reasonable; however, if it appears that the Contractor would have sustained a loss on the entire contract had it been completed, the Contracting Officer shall allow no profit under this subdivision (iii) and shall reduce the settlement to reflect the indicated rate of loss.

(2) The reasonable costs of settlement of the work terminated, including--

(i) Accounting, legal, clerical, and other expenses reasonably

necessary for the preparation of termination settlement proposals and supporting data;

(ii) The termination and settlement of subcontracts (excluding the amounts of such settlements); and

(iii) Storage, transportation, and other costs incurred, reasonably necessary for the preservation, protection, or disposition of the termination inventory.

(h) Except for normal spoilage, and except to the extent that the Government expressly assumed the risk of loss, the Contracting Officer shall exclude from the amounts payable to the Contractor under paragraph (g) of this clause, the fair value, as determined by the Contracting Officer, of property that is destroyed, lost, stolen, or damaged so as to become undeliverable to the Government or to a buyer.

(i) The cost principles and procedures of Part 31 of the Federal Acquisition Regulation, in effect on the date of this contract, shall govern all costs claimed, agreed to, or determined under this clause.

(j) The Contractor shall have the right of appeal, under the Disputes clause, from any determination made by the Contracting Officer under paragraph (e), (g), or (l) of this clause, except that if the Contractor failed to submit the termination settlement proposal or request for equitable adjustment within the time provided in paragraph (e) or (l), respectively, and failed to request a time extension, there is no right of appeal.

(k) In arriving at the amount due the Contractor under this clause, there shall be deducted--

(1) All unliquidated advance or other payments to the Contractor under the terminated portion of this contract;

(2) Any claim which the Government has against the Contractor under this contract; and

(3) The agreed price for, or the proceeds of sale of, materials, supplies, or other things acquired by the Contractor or sold under the provisions of this clause and not recovered by or credited to the Government.

(l) If the termination is partial, the Contractor may file a proposal with the Contracting Officer for an equitable adjustment of the price(s) of the continued portion of the contract. The Contracting Officer shall make any equitable adjustment agreed upon. Any proposal by the Contractor for an equitable adjustment under this clause shall be requested within 90 days from the effective date of termination unless extended in writing by the Contracting Officer.

(m)(1) The Government may, under the terms and conditions it prescribes, make partial payments and payments against costs incurred by the Contractor for the terminated portion of the contract, if the Contracting Officer believes the total of these payments will not exceed the amount to which the Contractor will be entitled.

(2) If the total payments exceed the amount finally determined to be due, the Contractor shall repay the excess to the Government upon demand, together with interest computed at the rate established by the Secretary of the Treasury under 50 U.S.C. App. 1215(b)(2). Interest shall be computed for the period from the date the excess payment is received by the Contractor to the date the excess is repaid. Interest shall not be charged on any excess payment due to a reduction in the Contractor's termination settlement proposal because of retention or other disposition of termination inventory until 10 days after the date of the retention or disposition, or a later date determined by the Contracting Officer because of the circumstances.

(n) Unless otherwise provided in this contract or by statute, the Contractor shall maintain all records and documents relating to the terminated portion of this contract for 3 years after final settlement. This includes all books and other evidence bearing on the Contractor's

costs and expenses under this contract. The Contractor shall make these records and documents available to the Government, at the Contractor's office, at all reasonable times, without any direct charge. If approved by the Contracting Officer, photographs, microphotographs, or other authentic reproductions may be maintained instead of original records and documents.

(End of clause)

75      52.249-10      DEFAULT (FIXED-PRICE CONSTRUCTION) (APR 1984)

(a) If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will insure its completion within the time specified in this contract including any extension, or fails to complete the work within this time, the Government may, by written notice to the Contractor, terminate the right to proceed with the work (or the separable part of the work) that has been delayed. In this event, the Government may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the Government resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the Government in completing the work.

(b) The Contractor's right to proceed shall not be terminated nor the Contractor charged with damages under this clause, if-

(1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include (i) acts of God or of the public enemy, (ii) acts of the Government in either its sovereign or contractual capacity, (iii) acts of another Contractor in the performance of a contract with the Government, (iv) fires, (v) floods, (vi) epidemics, (vii) quarantine restrictions, (viii) strikes, (ix) freight embargoes, (x) unusually severe weather, or (xi) delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and

(2) The Contractor, within 10 days from the beginning of any delay (unless extended by the Contracting Officer), notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, the time for completing the work shall be extended. The findings of the Contracting Officer shall be final and conclusive on the parties, but subject to appeal under the Disputes clause.

(c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Government.

(d) The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

76      52.253-1      COMPUTER GENERATED FORMS (JAN 1991)

(a) Any data required to be submitted on a Standard or Optional Form prescribed by the Federal Acquisition Regulation (FAR) may be submitted on

a computer generated version of the form, provided there is no change to the name, content, or sequence of the data elements on the form, and provided the form carries the Standard or Optional Form number and edition date.

(b) Unless prohibited by agency regulations, any data required to be submitted on an agency unique form prescribed by an agency supplement to the FAR may be submitted on a computer generated version of the form provided there is no change to the name, content, or sequence of the data elements on the form and provided the form carries the agency form number and edition date.

(c) If the Contractor submits a computer generated version of a form that is different than the required form, then the rights and obligations of the parties will be determined based on the content of the required form.

(End of clause)

77 52.201-7000 CONTRACTING OFFICER'S REPRESENTATIVE (DEC 1991)

(a) Definition. "Contracting officer's representative" means an individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the Contracting Officer to perform specific technical or administrative functions.

(b) If the Contracting Officer designates a contracting officer's representative (COR), the Contractor will receive a copy of the written designation. It will specify the extent of the COR's authority to act on behalf of the Contracting Officer. The COR is not authorized to make any commitments or changes that will affect price, quality, quantity, delivery, or any other term or condition of the contract.

(End of clause)

78 52.203-7001 SPECIAL PROHIBITION ON EMPLOYMENT (JUN 1997)

(a) Definitions.

As used in this clause--

(1) "Arising out of a contract with the DoD" means any act in connection with--

(i) Attempting to obtain,

(ii) Obtaining, or

(iii) Performing a contract or first-tier subcontract of any agency, department, or component of the Department of Defense (DoD).

(2) "Conviction of fraud or any other felony" means any conviction for fraud or a felony in violation of state or Federal criminal statutes, whether entered on a verdict or plea, including a plea of nolo contendere, for which sentence has been imposed.

(3) "Date of conviction" means the date judgment was entered against the individual.

(b) 10 U.S.C. 2408 provides that any individual who is convicted after September 29, 1988, of fraud or any other felony arising out of a contract with the DoD is prohibited from:

(1) Working in a management or supervisory capacity on any DoD contract or first-tier subcontract;

(2) Serving on the board of directors of any DoD Contractor or first-tier subcontractor; or

(3) Serving as a consultant to any DoD Contractor or first-tier subcontractor.

(c) Unless waived, the prohibition in paragraph (b) applies for five years from the date of conviction.



(d) 10 U.S.C. 2408 further provides that a defense Contractor or first-tier subcontractor shall be subject to a criminal penalty of not more than \$500,000 if convicted of knowingly--

(1) Employing a person under a prohibition specified in paragraph (b) of this clause; or

(2) Allowing such a person to serve on the board of directors of the Contractor or first-tier subcontractor.

(e) In addition to the criminal penalties contained in 10 U.S.C. 2408, the Government may consider other available remedies, such as--

(1) Suspension or debarment;

(2) Cancellation of the contract at no cost to the Government; or

(3) Termination of the contract for default.

(f) The Contractor may submit written requests for waiver of the prohibitions in paragraph (b) of this clause to the Contracting Officer. Requests shall clearly identify--

(1) The person involved;

(2) The nature of the conviction and resultant sentence or punishment imposed;

(3) The reasons for the requested waiver; and,

(4) An explanation of why a waiver is in the interest of national security.

(g) The Contractor agrees to include the substance of this clause, appropriately modified to reflect the identity and relationship of the parties, in all first-tier subcontracts exceeding the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation, except those for commercial items or components.

(h) Pursuant to 10 U.S.C. 2408(c), defense contractors and subcontractors may obtain information as to whether a particular person has been convicted of fraud or any other felony arising out of a contract with the DoD by contacting The Office of Justice Programs, The Denial of Benefits Office, U.S. Department of Justice, telephone (202) 616-3507.

(End of clause)

79 52.204-7003 CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT (APR 1992)

The Contractor's procedures for protecting against unauthorized disclosure of information shall not require Department of Defense employees or members of the Armed Forces to relinquish control of their work products, whether classified or not, to the Contractor.

(End of clause)

80 52.223-7004 DRUG-FREE WORK FORCE (SEP 1988)

(a) Definitions.

(1) "Employee in a sensitive position," as used in this clause, means an employee who has been granted access to classified information; or employees in other positions that the Contractor determines involve national security, health or safety, or functions other than the foregoing requiring a high degree of trust and confidence.

(2) "Illegal drugs," as used in this clause, means controlled substances included in Schedules I and II, as defined by section 802(6) of Title 21 of the United States Code, the possession of which is unlawful under Chapter 13 of that Title. The term "illegal drugs" does not mean the use of a controlled substance pursuant to a valid prescription or other uses authorized by law.

(b) The Contractor agrees to institute and maintain a program for achieving the objective of a drug-free work force. While this clause defines criteria for such a program, contractors are encouraged to

implement alternative approaches comparable to the criteria in paragraph (c) that are designed to achieve the objectives of this clause.

(c) Contractor programs shall include the following, or appropriate alternatives:

(1) Employee assistance programs emphasizing high level direction, education, counseling, rehabilitation, and coordination with available community resources;

(2) Supervisory training to assist in identifying and addressing illegal drug use by Contractor employees;

(3) Provision for self-referrals as well as supervisory referrals to treatment with maximum respect for individual confidentiality consistent with safety and security issues;

(4) Provision for identifying illegal drug users, including testing on a controlled and carefully monitored basis. Employee drug testing programs shall be established taking account of the following:

(i) The Contractor shall establish a program that provides for testing for the use of illegal drugs by employees in sensitive positions. The extent of and criteria for such testing shall be determined by the Contractor based on considerations that include the nature of the work being performed under the contract, the employee's duties, the efficient use of Contractor resources, and the risks to health, safety, or national security that could result from the failure of an employee adequately to discharge his or her position.

(ii) In addition, the Contractor may establish a program for employee drug testing--

(A) When there is a reasonable suspicion that an employee uses illegal drugs; or

(B) When an employee has been involved in an accident or unsafe practice;

(C) As part of or as a follow-up to counseling or rehabilitation for illegal drug use;

(D) As part of a voluntary employee drug testing program.

(iii) The Contractor may establish a program to test applicants for employment for illegal drug use.

(iv) For the purpose of administering this clause, testing for illegal drugs may be limited to those substances for which testing is prescribed by section 2.1 of Subpart B of the "Mandatory Guidelines for Federal Workplace Drug Testing Programs" (53 FR 11980 (April 11 1988)), issued by the Department of Health and Human Services.

(d) Contractors shall adopt appropriate personnel procedures to deal with employees who are found to be using drugs illegally. Contractors shall not allow any employee to remain on duty or perform in a sensitive position who is found to use illegal drugs until such time as the Contractor, in accordance with procedures established by the Contractor, determines that the employee may perform in such a position.

(e) The provisions of this clause pertaining to drug testing programs shall not apply to the extent they are inconsistent with state or local law, or with an existing collective bargaining agreement; provided that with respect to the latter, the Contractor agrees that those issues that are in conflict will be a subject of negotiation at the next collective bargaining session.

(End of clause)

81 52.223-7006 PROHIBITION ON STORAGE AND DISPOSAL OF TOXIC AND HAZARDOUS MATERIALS (APR 1993)

(a) Definitions. As used in this clause--

(1) "Storage" means a non-transitory, semi-permanent or permanent holding, placement, or leaving of material. It does not include a

temporary accumulation of a limited quantity of a material used in or a waste generated or resulting from authorized activities, such as servicing, maintenance, or repair of Department of Defense (DoD) items, equipment, or facilities.

(2) "Toxic or hazardous materials" means:

(i) Materials referred to in section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 U.S.C. 9601(14)) and materials designated under section 102 of CERCLA (42 U.S.C. 9602)(40 CFR Part 302);

(ii) Materials that are of an explosive, flammable, or pyrotechnic nature; or

(iii) Materials otherwise identified by the Secretary of Defense as specified in DoD regulations.

(b) In accordance with 10 U.S.C. 2692, the Contractor is prohibited from storing or disposing of non-DoD-owned toxic or hazardous materials on a DoD installation, except to the extent authorized by a statutory exception to 10 U.S.C. 2692 or as authorized by the Secretary of Defense or his designee.

(End of clause)

82 52.225-7031 SECONDARY ARAB BOYCOTT OF ISRAEL (JUN 1992)

(a) Definitions.

As used in this clause--

(1) "Foreign person" means any person other than a United States person as defined in section 16(2) of the Export Administration Act of 1979 (50 U.S.C. App. Sec 2415).

(2) "United States person" is defined in section 16(2) of the Export Administration Act of 1979 and means any United States resident or national (other than an individual resident outside the United States and employed by other than a United States person), any domestic concern (including any permanent domestic establishment of any foreign concern), and any foreign subsidiary or affiliate (including any permanent foreign establishment) of any domestic concern which is controlled in fact by such domestic concern, as determined under regulations of the President.

(b) Certification.

By submitting this offer, the Offeror, if a foreign person, company or entity, certifies that it--

(1) Does not comply with the Secondary Arab Boycott of Israel; and

(2) Is not taking or knowingly agreeing to take any action, with respect to the Secondary Boycott of Israel by Arab countries, which 50 U.S.C. App. Sec 2407(a) prohibits a United States person from taking.

(End of clause)

83 52.227-7033 RIGHTS IN SHOP DRAWINGS (1966)

(a) Shop drawings for construction means drawings, submitted to the Government by the Construction Contractor, subcontractor or any lower-tier subcontractor pursuant to a construction contract, showing in detail (i) the proposed fabrication and assembly of structural elements and (ii) the installation (i.e., form, fit, and attachment details) of materials or equipment. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(b) This clause, including this paragraph (b), shall be included in all subcontracts hereunder at any tier.

(End of clause)

84 52.231-7000 SUPPLEMENTAL COST PRINCIPLES (DEC 1991)

When the allowability of costs under this contract is determined in accordance with Part 31 of the Federal Acquisition Regulation (FAR), allowability shall also be determined in accordance with Part 231 of the Defense FAR Supplement, in effect on the date of this contract.

(End of Clause)

85 52.236-7000 MODIFICATION PROPOSALS--PRICE BREAKDOWN (DEC 1991)

(a) The Contractor shall furnish a price breakdown, itemized as required and within the time specified by the Contracting Officer, with any proposal for a contract modification.

(b) The price breakdown--

(1) Must include sufficient detail to permit an analysis of profit, and of all costs for--

- (i) Material;
- (ii) Labor;
- (iii) Equipment;
- (iv) Subcontracts; and
- (v) Overhead; and

(2) Must cover all work involved in the modification, whether the work was deleted, added, or changed.

(c) The Contractor shall provide similar price breakdowns to support any amounts claimed for subcontracts.

(d) The Contractor's proposal shall include a justification for any time extension proposed.

(End of clause)

86 52.236-7008 CONTRACT PRICES--BIDDING SCHEDULES (DEC 1991)

(a) The Government's payment for the items listed in the Bidding Schedule shall constitute full compensation to the Contractor for--

(1) Furnishing all plant, labor, equipment, appliances, and materials; and

(2) Performing all operations required to complete the work in conformity with the drawings and specifications.

(b) The Contractor shall include in the prices for the items listed in the Bidding Schedule all costs for work in the specifications, whether or not specifically listed in the Bidding Schedule.

(End of provision)

87 52.243-7001 PRICING OF CONTRACT MODIFICATIONS (DEC 1991)

When costs are a factor in any price adjustment under this contract, the contract cost principles and procedures in FAR Part 31 and DFARS Part 231, in effect on the date of this contract, apply.

(End of clause)

88 52.247-7023 TRANSPORTATION OF SUPPLIES BY SEA (NOV 1995)

(a) Definitions. As used in this clause--

(1) "Components" means articles, materials, and supplies incorporated directly into end products at any level of manufacture, fabrication, or assembly by the Contractor or any subcontractor.

(2) "Department of Defense (DoD)" means the Army, Navy, Air Force, Marine Corps, and defense agencies.

(3) "Foreign flag vessel" means any vessel that is not a U.S.-flag

vessel.

(4) "Ocean transportation" means any transportation aboard a ship, vessel, boat, barge, or ferry through international waters.

(5) "Subcontractor" means a supplier, materialman, distributor, or vendor at any level below the prime contractor whose contractual obligation to perform results from, or is conditioned upon, award of the prime contract and who is performing any part of the work or other requirement of the prime contract. However, effective May 1, 1996, the term does not include a supplier, materialman, distributor, or vendor of commercial items or commercial components.

(6) "Supplies" means all property, except land and interests in land, that is clearly identifiable for eventual use by or owned by the DoD at the time of transportation by sea.

(i) An item is clearly identifiable for eventual use by the DoD if, for example, the contract documentation contains a reference to a DoD contract number or a military destination.

(ii) Supplies includes (but is not limited to) public works; buildings and facilities; ships; floating equipment and vessels of every character, type, and description, with parts, subassemblies, accessories, and equipment; machine tools; material; equipment; stores of all kinds; end items; construction materials; and components of the foregoing.

(7) "U.S.-flag vessel" means a vessel of the United States or belonging to the United States, including any vessel registered or having national status under the laws of the United States.

(b) The Contractor shall employ U.S.-flag vessels in the transportation by sea of any supplies to be furnished in the performance of this contract. The Contractor and its subcontractors may request that the Contracting Officer authorize shipment in foreign-flag vessels, or designate available U.S.-flag vessels, if the Contractor or a subcontractor believes that--

(1) U.S.-flag vessels are not available for timely shipment;

(2) The freight charges are inordinately excessive or unreasonable; or

(3) Freight charges are higher than charges to private persons for transportation of like goods.

(c) The Contractor must submit any request for use of other than U.S.-flag vessels in writing to the Contracting Officer at least 45 days prior to the sailing date necessary to meet its delivery schedules. The Contracting Officer will process requests submitted after such date(s) as expeditiously as possible, but the Contracting Officer's failure to grant approvals to meet the shipper's sailing date will not of itself constitute a compensable delay under this or any other clause of this contract.

Requests shall contain at a minimum--

(1) Type, weight, and cube of cargo;

(2) Required shipping date;

(3) Special handling and discharge requirements;

(4) Loading and discharge points;

(5) Name of shipper and consignee;

(6) Prime contract number; and

(7) A documented description of efforts made to secure U.S.-flag vessels, including points of contact (with names and telephone numbers) with at least two U.S.-flag carriers contacted. Copies of telephone notes, telegraphic and facsimile message or letters will be sufficient for this purpose.

(d) The Contractor shall, within 30 days after each shipment covered by this clause, provide the Contracting Officer and the Division of National Cargo, Office of Market Development, Maritime Administration, U.S. Department of Transportation, Washington, DC 20590, one copy of the rated on board vessel operating carrier's ocean bill of lading, which shall contain the following information--

(1) Prime contract number;

- (2) Name of vessel;
- (3) Vessel flag of registry;
- (4) Date of loading;
- (5) Port of loading;
- (6) Port of final discharge;
- (7) Description of commodity;
- (8) Gross weight in pounds and cubic feet if available;
- (9) Total ocean freight in U.S. dollars; and
- (10) Name of the steamship company.

(e) The Contractor agrees to provide with its final invoice under this contract a representation that to the best of its knowledge and belief--

(1) No ocean transportation was used in the performance of this contract;

(2) Ocean transportation was used and only U.S.-flag vessels were used for all ocean shipments under the contract;

(3) Ocean transportation was used, and the Contractor had the written consent of the Contracting Officer for all non-U.S.-flag ocean transportation; or

(4) Ocean transportation was used and some or all of the shipments were made on non-U.S.-flag vessels without the written consent of the Contracting Officer. The Contractor shall describe these shipments in the following format:

	Item Description	Contract Line Items	Quantity
Total.....			

(f) If the final invoice does not include the required representation, the Government will reject and return it to the Contractor as an improper invoice for the purposes of the Prompt Payment clause of this contract. In the event there has been unauthorized use of non-U.S.-flag vessels in the performance of this contract, the Contracting Officer is entitled to equitably adjust the contract, based on the unauthorized use.

(g) The Contractor shall include this clause, including this paragraph (g) in all subcontracts under this contract, which exceed the simplified acquisition threshold in Part 13 of the Federal Acquisition Regulation.

(End of clause)

89 52.247-7024 NOTIFICATION OF TRANSPORTATION OF SUPPLIES BY SEA (NOV 1995)

(a) The Contractor has indicated by the response to the solicitation provision, Representation of Extent of Transportation by Sea, that it did not anticipate transporting by sea any supplies. If, however, after the award of this contract, the Contractor learns that supplies, as defined in the Transportation of Supplies by Sea clause of this contract, will be transported by sea, the Contractor--

(1) Shall notify the Contracting Officer of that fact; and

(2) Hereby agrees to comply with all the terms and conditions of the Transportation of Supplies by Sea clause of this contract.

(b) The Contractor shall include this clause, including this paragraph (b), revised as necessary to reflect the relationship of the contracting parties, in all subcontracts hereunder, except (effective May 1, 1996) subcontracts for the acquisition of commercial items or components.

(End of clause)

END OF SECTION 00700



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## General Decision Number IL980017

General Decision Number **IL980017**

Superseded General Decision No. IL970017

State: **Illinois**

Construction Type:

HEAVY

HIGHWAY

County(ies):

BOND

JERSEY

MONTGOMERY

CALHOUN

MACOUPIN

ST CLAIR

**CLINTON**

MADISON

WASHINGTON

GREENE

MONROE

HEAVY CONSTRUCTION PROJECTS (including Sewer & Water Line Construction & Drainage Projects) & HIGHWAY CONSTRUCTION PROJECT (excluding tunnels, building structures in rest areas projects, and railroad construction; bascule, suspension & spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction, other marine bridges)

Modification Number	Publication Date
0	02/13/1998
1	02/20/1998
2	04/03/1998
3	07/10/1998
4	08/07/1998
5	09/04/1998
6	10/16/1998
7	10/30/1998
8	11/06/1998
9	11/13/1998

COUNTY(ies):

BOND

JERSEY

MONTGOMERY

CALHOUN

MACOUPIN

ST CLAIR

**CLINTON**

MADISON

WASHINGTON

GREENE

MONROE

CARP0016A 05/01/1998

Rates

Fringes

MACOUPIN (N 1/3) & MONTGOMERY (N 1/3, INCLUDING WAGGONER, STANDARD CITY, & NORTH THEREOF) COUNTIES:

CARPENTERS	19.76	8.63
PILEDRIVERS	20.26	8.63
MILLWRIGHTS	21.22	7.63

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CARP0295A 05/01/1994

Rates

Fringes

GREENE (South of Apple Creek) COUNTY:

CARPENTERS, LATHERS, and

SOFT FLOOR LAYERS

18.39

6.17

MILLWRIGHTS

19.23

5.99

PILEDRIVERS

18.89

6.17

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CARP0295E 08/01/1995

Rates

Fringes

MADISON COUNTY:

CARPENTERS & PILEDRIVERS

20.46

6.34

CARP0295H 08/01/1997

	Rates	Fringes
BOND, CALHOUN, & JERSEY COUNTIES: CARPENTERS, MILLWRIGHTS & PILEDRIVERS	21.41	7.34

CARP0500A 08/01/1995

	Rates	Fringes
<b>CLINTON</b> , MONROE, & WASHINGTON COUNTIES: CARPENTERS & PILEDRIVERMEN	20.46	6.34

CARP0500C 08/01/1995

	Rates	Fringes
ST. CLAIR COUNTY: CARPENTERS & PILEDRIVERMEN	20.46	6.34

CARP0904E 05/01/1998

	Rates	Fringes
GREENE (Except S. of Apple Creek) COUNTY: CARPENTERS	20.38	8.01
PILEDRIVERS	20.88	8.01

\* ELEC0193C 04/01/1998

	Rates	Fringes
MACOUPIN (ATHENVILLE, SCOTTVILLE, GIRARD AND AREA N. THEREOF), & MONTGOMERY (NW PART INCLUDING BOIS D ARC, HARVEL & PITMAN TWPS.) COUNTIES		
WIREMAN	24.96	2.00+24.75%
BOND (E 1/2), <b>CLINTON</b> (HUEY, HOFFMAN & VIC.), & WASHINGTON (EXCEPT VENEDY TWP.) COUNTIES		
ELECTRICIANS	24.96	2.00+24.75%
CALHOUN, GREENE, JERSEY, MACOUPIN (BRIGHTON TWP.), & MADISON (ALTON & VIC.) COUNTIES		
ELECTRICIANS	24.96	2.00+24.75
MONTGOMERY (E. OF BUTLER GROVE, GRISHAM, HILLSBORO & RAYMOND TWPS) COUNTIES		
ELECTRICIANS	24.96	2.00+24.75%

ELEC0309B 12/01/1997

	Rates	Fringes
BOND (W 1/2), <b>CLINTON</b> , GREENE (ALL WORK PERFORMED ON THE <b>ILLINOIS</b> POWER COMPANY PRC <b>ILLINOIS</b> POWER COMPANY PROPERTY),MACOUPIN (EXCEPT N 1/3 & SW CORNER), MADISON (EXCEPT E. ALTON, ALTON, WOOD RIVER & HARTFORD), MONROE, MONTGOMERY ( E. OF ROUNDTREE, IRVING & E. FORK TWP.), RANDOLPH (THAT PORTION OF RED BUD TOWNSHIP),ST. CLAIR, & WASHINGTON (OKAWVILLE & VENEDY TWPS.) COUNTIES		
LINEMEN	26.51	41.5
GROUNDMEN EQUIPMENT OPERATORS	23.06	41.5
GROUNDMEN TRUCK DRIVER	18.82	41.5
GROUNDMAN	17.23	41.5

ELEC0309C 12/01/1997

	Rates	Fringes
BOND (W 1/2), <b>CLINTON</b> (EXCLUDES HUEY, HOFFMAN, & VIC.), MACOUPIN (EXCLUDES BRIGHTON TWP., ATHENVILLE, SCOTTVILLE, GIRARD & AREA N. THEREOF), MONROE, MONTGOMERY, WASHINGTON (VENEDY TWP.), MADISON (EXCLUDES ALTON & VIC.) & ST. CLAIR COUNTIES		
ELECTRICIAN	26.51	41.5%

ELEC0649B 11/28/1994

	Rates	Fringes
CALHOUN, GREENE, JERSEY, MACOUPIN (SW CORNER), & MADISON (E. ALTON, ALTON, WOOD RIVER & HARTFORD) COUNTIES		

LINEMEN	24.24	2.80+19.5%
GROUNDMEN, EQUIPMENT OPERATORS	20.72	2.80+19.5%
GROUNDMAN-TRUCK DRIVER W/WINCH	15.90	2.80+19.5%
GROUNDMAN-TRUCK DRIVER WO/WINCH	14.78	2.80+19.5%
GROUNDMAN	14.34	2.80+19.5%

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 ELEC0702F 09/02/1996

	Rates	Fringes
BOND (E 1/2), & WASHINGTON (OKAWVILLE & VENDY TWPS.) COUNTIES LINE CONSTRUCTION		
Lineman	26.67	2.00+18.5%
Groundman Equipment Operator (All crawler type equipment D-4 and larger)	22.04	2.00+18.5%
Groundman Equipment operator (All other equipment)	19.73	2.00+18.5%
Groundman	16.36	2.00+18.5%

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 ENGI0520E 08/01/1998

	Rates	Fringes
BOND, CALHOUN, <b>CLINTON</b> , GREENE, JERSEY, MACOUPIN, MADISON, MONROE, MONTGOMERY, ST. CLAIR, & WASHINGTON COUNTIES: POWER EQUIPMENT OPERATORS:		
GROUP 1:	22.60	10.35
GROUP 2:	17.89	10.35
GROUP 3:	17.05	10.35
GROUP 4:	16.72	10.35
GROUP 5:	23.15	10.35
GROUP 6:	23.45	10.35
GROUP 7:	23.73	10.35
GROUP 1: CRANES; DRAGLINES; SHOVELS; SKIMMER SCOOPS; CLAMSHELLS OR DERRICK BOATS; PILEDRIVERS; CRANE-TYPE BACKHOES; ASPHALT PLANT OPER; CONCRETE PLANT OPERATOR; DREDGES; ASPHALT SPREADING MACHINES; LOCOMOTIVES; CABLEWAYS OR TOWER MACHINES; HOISTS; HYDRAULIC BACKHOES; DITCHING MACHINES OR BACKFILLER; CHERRY PICKERS; OVERHEAD CRANE; ROLLER; CONCRETE PAVER; CONCRETE BREAKERS & PUMPS; BULK CEMENT PLANTS; CEMENT PUMPS; DERRICK TYPE DRILLS; BOAT OPERATORS; MOTOR GRADERS OR PUSHCATS; SCOOPS OR TOURNAPULLS; BULLDOZERS; ENDLOADERS OR FORKLIFTS; POWER BLADE OR ELEVATING GRADERS; WINCH CATS; BOOM OR WINCH TRUCKS OR BOOM TRACTORS, PIPEWRAPPING OR PAINTING MACHINES; DRILLS (OTHER THAN DERRICK TYPE); MUD JACKS; WELL DRILLING MACHINES; MIXERS; CONVEYORS (TWO); AIR COMPRESSORS TWO; WATER PUMPS REGARDLESS OF SIZE; WELDING MACHINES TWO; SIPHONS OR JETS TWO; WINCH HEADS OR APPARATUS TWO; LIGHT PLANTS TWO; TRACTORS REGARDLESS OF SIZE STRAIGHT (TRACTOR ONLY); FIREMEN ON STATIONARY BOILERS; AUTOMATIC ELEVATORS; FORM GRADING MACHINES; FINISHING MACHINES; POWER SUB-GRADER OR RIBBON MACHINE; LONGITUDINAL FLOATS; DISTRIBUTION OPERATOR ON TRUCKS; WINCH HEADS OR APPARATUSES (1); EXCAVATORS; MOBILE TRACK AIR AND HEATER (TWO TO FIVE); HEAVY EQUIPMENT GREASER AND ALL OTHER OPERATORS NOT LISTED BELOW.		
GROUP 2: AIR COMPRESSOR ONE; WATER PUMP REGARDLESS OF SIZE ONE; WELDING MACHINE ONE; 1-BAG MIXER ONE; CONVEYOR ONE; SIPHON OR JET; LIGHT PLANT ONE; HEATER ONE; IMMOBILE TRACK AIR ONE.		
GROUP 3: FIREMEN ON WHIRLIES AND ASPHALT SPREADER OILERS; HEAVY EQUIPMENT OILERS; TRUCK CRANES; MONIGANS; LARGE (OVER 65 TON RATE CAPACITY); CONCRETE PLANT OILER AND BLACK		

TOP PLANT OILER.

GROUP 4: OILERS

GROUP 5: MASTER MECHANIC; OPERATORS ON EQUIPMENT WITH BOOMS, INCLUDING JIBS, ONE HUNDRED FEET AND OVER; AND LESS THAN 150 FEET.

GROUP 6: OPERATORS ON EQUIPMENT WITH BOOMS, INCLUDING JIBS, 150 FEET AND OVER, AND LESS THAN 200 FEET.

GROUP 7: OPERATORS ON EQUIPMENT WITH BOOMS, INCLUDING JIBS, 200 FEET AND OVER; TOWER CRANES AND WHIRLEY CRANES.

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IRON0046F 05/01/1998

	Rates	Fringes
GREENE (N 1/2), MACOUPIN (N. OF SUMMERVILLE), & MONTGOMERY ( N. OF LITCHFIELD & HILLSBORO) COUNTIES		
IRONWORKERS	19.30	9.55

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IRON0392C 08/01/1998

	Rates	Fringes
BOND, CALHOUN, <b>CLINTON</b> , GREENE (S 1/2), JERSEY, MACOUPIN (SUMMERVILLE & S. THEREOF), MADISON, MONROE, MONTGOMERY (LITCHFIELD, HILLSBORO, & S. THEREOF), ST. CLAIR, & WASHINGTON COUNTIES		
BRIDGES, LOCKS, AND DAMS ON THE MISSISSIPPI RIVER		
IRONWORKERS	21.86	7.45
ALL OTHER WORK:		
IRONWORKER	20.80	10.00

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\* IRON0396F 08/05/1998

	Rates	Fringes
BRIDGES, LOCKS, & DAMS ON THE MISSISSIPPI RIVER		
IRONWORKERS	22.81	9.70

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LABO0044B 08/01/1997

	Rates	Fringes
MADISON (COLLINSVILLE) COUNTY		
LABORER		
GROUP 1	18.00	8.40
GROUP 2	18.25	8.40
GROUP 3	18.50	8.40
GROUP 4	19.525	8.40

#### LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

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LABO0084B 08/01/1997

	Rates	Fringes
GREENE (Roadhouse) & MONTGOMERY (Litchfield) COUNTIES:		
LABORERS		
GROUP 1	23.35	3.05
GROUP 2	23.70	3.05
GROUP 3	23.85	3.05

GROUP 4 24.10 3.05

LABORERS CLASSIFICATIONS

GROUP 1: General Laborers.

GROUP 2: Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3: Brick Mason Tenders and Plasterer Tenders.

GROUP 4: Dynamite and Powder Men.

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LABO0100A 08/01/1993

	Rates	Fringes
ST CLAIR (East St Louis & Vicinity) COUNTY		
HEAVY CONSTRUCTION		
GROUP 1	19.10	4.05
GROUP 2	19.65	4.05
GROUP 3	19.35	4.05
GROUP 4	19.365	4.05
GROUP 5	19.525	4.05

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers

GROUP 2 - Brick mason and plasterer tenders

GROUP 3 - Work in septic tanks, cess pools or dry well (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted materials; When raking or luting asphalt; While burning and cutting with a torch; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies;

GROUP 4 - Working on bottom of sewer trenches on final grading, laying or caulking of performed sectional sewer pipe

GROUP 5 - Dynamite men and powder man

HIGHWAY CONSTRUCTION

GROUP 1	18.70	3.35
GROUP 2	18.95	3.35
GROUP 3	19.20	3.35
GROUP 4	20.225	3.35

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Ranking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

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LABO0179E 08/01/1997

	Rates	Fringes
MADISON (Edwardsville, Marine, Livingston) COUNTY:		
GROUP 1	19.05	7.35
GROUP 2	19.30	7.35
GROUP 3	19.55	7.35

GROUP 4 20.575 7.35

LABOREER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Ranking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking or performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

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LABO0196B 08/01/1997

	Rates	Fringes
MONROE COUNTY		
LABORER:		
GROUP 1:	18.75	7.65
GROUP 2:	19.00	7.65
GROUP 3:	19.25	7.65
GROUP 4:	20.275	7.65

LABORER CLASSIFICATIONS

GROUP 1: General Laborer

GROUP 2: Work in septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on bottom of sewer trenches on the final grading, laying or caulking of performed sectional sewer pipe; High Time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick mason and Plasterer Tenders

GROUP 4 - Dynamite and Powder men

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LABO0197A 08/01/1997

	Rates	Fringes
ST. CLAIR (BELLEVILLE) COUNTY		
HOD CARRIERS	21.70	5.20

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LABO0218B 08/01/1997

	Rates	Fringes
MADISON (ALTON) COUNTY		
GROUP 1	19.20	7.20
GROUP 2	19.45	7.20
GROUP 3	19.70	7.20
GROUP 4	20.725	7.20

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.  
 GROUP 4 - Dynamite and Powder Men.

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 LABO0338D 08/01/1997

	Rates	Fringes
MADISON (Wood River) COUNTY:		
GROUP 1	18.20	8.20
GROUP 2	18.45	8.20
GROUP 3	18.70	8.20
GROUP 4	19.725	8.20

LABORER CLASSIFICATIONS

GROUP 1: General Laborers  
 GROUP 2: Work in septic tanks, Cess Pools, or Dry Wells (old or new); All feeders, Mixers and Nozzle men on Gunnite or Sandblasting Work; When handling creosoted materials; Raking or luting asphalt; Burning or Cutting with Torch; Working on bottom of sewer trenches on the final Grading, Laying or Caulking of performed sectional sewer pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, Mixing and Applying of mastic such as Sulfa-seal and/or other Coal derivative  
 GROUP 3: Brick Mason and Plasterer Tenders  
 GROUP 4: Dynamite and Power Men

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 LABO0382C 08/01/1997

	Rates	Fringes
MADISON (TROY) COUNTY		
GROUP 1	20.25	6.55
GROUP 2	20.42	6.55
GROUP 3	20.75	6.55
GROUP 4	21.10	6.55

LABORERR CLASSIFICATIONS

GROUP 1 - General Laborers.  
 GROUP 2 - Working on Bottom of Sewer Trenches; using burning or cutting torches; working with mastic; working with cresote or other harmful material; using chain saws; high work of +25 feet.  
 GROUP 3 - Brick Mason Tenders and Plasterer Tenders.  
 GROUP 4 - Dynamite and Powder Men.

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 LABO0397C 08/01/1997

	Rates	Fringes
MADISON (GRANITE CITY & Vicinity) COUNTY		
HEAVY CONSTRUCTION		
GROUP 1	20.25	6.55
GROUP 2	20.525	6.55
GROUP 3	20.75	6.55
GROUP 4	20.775	6.55
GROUP 5	21.575	6.55

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers  
 GROUP 2 - Cutting, burning and welding  
 GROUP 3 - Brick Mason Tenders and Plasterer Tenders  
 GROUP 4 - Oxygen lancing;  
 GROUP 5 - Dynamite men  
 HIGHWAY CONSTRUCTION

	Rates	Fringes
GROUP 1	18.70	4.05
GROUP 2	18.95	4.05
GROUP 3	19.20	4.05
GROUP 4	20.225	4.05

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

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LABO0454B 08/01/1997

	Rates	Fringes
ST. CLAIR (EAST ST. LOUIS) COUNTY:		
HOD CARRIERS	23.00	3.90

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LABO0459B 08/01/1997

	Rates	Fringes
ST. CLAIR (BELLEVILLE, FREEBURG, NEW ATHENS & VICINITY) COUNTY:		
LABORER		
GROUP 1	18.55	7.85
GROUP 2	18.80	7.85
GROUP 3	19.05	7.85
GROUP 4	20.075	7.85

#### LABORER CLASSIFICATION

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

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LABO0474A 08/01/1997

	Rates	Fringes
MADISON (GLEN CARBON) COUNTY:		
GROUP 1	18.05	8.35
GROUP 2	18.30	8.35
GROUP 3	18.55	8.35
GROUP 4	19.575	8.35

#### LABORERS CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.



LABO0548A 08/01/1997

	Rates	Fringes
WASHINGTON (NASHVILLE & ASHLEY) COUNTY		
GROUP 1	19.15	7.25
GROUP 2	19.40	7.25
GROUP 3	19.65	7.25
GROUP 4	20.675	7.25

## LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

LABO0581B 08/01/1997

	Rates	Fringes
CLINTON (CARLYLE) COUNTY		
GROUP 1	18.95	7.45
GROUP 2	19.20	7.45
GROUP 3	19.45	7.45
GROUP 4	20.475	7.45

## LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

LABO0622B 08/01/1997

	Rates	Fringes
BOND (Greenville) COUNTY:		
GROUP 1	19.45	6.95
GROUP 2	19.70	6.95
GROUP 3	19.95	6.95
GROUP 4	20.975	6.95

## LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.  
 GROUP 4 - Dynamite and Powder Men.

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 LABO0646B 08/01/1997

	Rates	Fringes
JERSEY (Jerseyville) COUNTY:		
GROUP 1	20.90	5.50
GROUP 2	21.15	5.50
GROUP 3	21.40	5.50
GROUP 4	22.425	5.50

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

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 LABO0670A 08/01/1997

	Rates	Fringes
ST CLAIR (O'Fallon, Scott Air Force Base, Shiloh, Lebanon & Vincinity) & <b>CLINTON</b> (Trenton & Vicinity) COUNTIES		
HEAVY CONSTRUCTION		
GROUP 1	19.60	7.20
GROUP 2	19.85	7.20
GROUP 3	20.10	7.20
GROUP 4	20.45	7.20

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers

GROUP 2 - Workmen on bottom of trench; Burning or cutting with torch; Cooking and handling of hot mastic materials; Handling creosote or other materials harmful to skin; Using chain saw; High time (20 feet or over)

GROUP 3 - Brick mason and plasterer tenders

GROUP 4 - Dynamite men and powder men

HIGHWAY CONSTRUCTION

GROUP 1	19.30	6.55
GROUP 2	19.55	6.55
GROUP 3	19.80	6.55
GROUP 4	20.15	6.55

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Working on Bottom of Sewer Trenches; using burning or cutting torches; working with mastic; working with creosote or other harmful material; using chain saws; high work of 25+ feet.

GROUP 3 - Brick Mason Tenders and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

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 LABO0674A 08/01/1997

	Rates	Fringes
MADISON (St. Jacob) COUNTY:		
GROUP 1	25.30	1.10
GROUP 2	25.55	1.10
GROUP 3	25.80	1.10
GROUP 4	26.825	1.10

## LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

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LABO0677A 08/01/1997

	Rates	Fringes
BOND (Pocahontas) COUNTY:		
LABORERS		
GROUP 1	25.50	.90
GROUP 2	25.75	.90
GROUP 3	26.00	.90
GROUP 4	27.025	.90

## LABORERS CLASSIFICATIONS

GROUP 1: General Laborers.

GROUP 2: Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3: Brick Mason Tenders and Plasterer Tenders.

GROUP 4: Dynamite and Powder Men.

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LABO0680A 08/01/1997

	Rates	Fringes
MADISON (Highland) COUNTY:		
GROUP 1	18.60	7.80
GROUP 2	18.85	7.80
GROUP 3	19.10	7.80
GROUP 4	20.125	7.80

## LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

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LABO0742A 08/01/1997

	Rates	Fringes
ST. CLAIR (MASCOUTAH) & CLINTON (NEW BADEN) COUNTIES		

## LABORER

GROUP 1:	18.50	8.30
GROUP 2:	18.75	8.30
GROUP 3:	19.00	8.30
GROUP 4:	19.35	8.30

## LABORER CLASSIFICATIONS

GROUP 1: General Laborers.

GROUP 2: Work in septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on bottom of sewer trenches on the final grading, laying or caulking of performed sectional sewer pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives.

GROUP 3: Brick mason and plasterer tenders

GROUP 4: Dynamite and powder men.

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LABO0835A 08/01/1997

	Rates	Fringes
GREENE (Roadhouse) COUNTY:		
LABORER HEAVY CONSTRUCTION		
GROUP 1	23.35	3.05
GROUP 2	23.60	3.05
GROUP 3	23.85	3.05
GROUP 4	24.875	3.05

## LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

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LABO0950A 08/01/1997

	Rates	Fringes
MACOUPIN (Carlinville, Gillespie, Mt. Olive, Shipman & Staunton) COUNTY:		
LABORER:		
GROUP 1:	17.95	8.45
GROUP 2:	18.20	8.45
GROUP 3:	18.45	8.45
GROUP 4:	19.475	8.45

## LABORERS CLASSIFICATIONS

GROUP 1: General Laborers.

GROUP 2: Work in septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on bottom of sewer trenches on the final grading, laying or caulking of performed sectional sewer pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal

derivatives.

GROUP 3: Brick mason and plasterer tenders.

GROUP 4: Dynamite and powder men.

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LABO0968A	08/01/1997		
		Rates	Fringes
CALHOUN (Hardin) COUNTY			
GROUP 1		25.80	.60
GROUP 2		26.05	.60
GROUP 3		26.30	.60
GROUP 4		27.325	.60

LABORERS CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Ranking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking or performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

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LABO1084A	08/01/1997		
		Rates	Fringes
MONTGOMERY AND BOND (Sorento) COUNTIES:			
LABORER:			
GROUP 1		18.25	8.15
GROUP 2		18.50	8.15
GROUP 3		18.75	8.15
GROUP 4		19.775	8.15

LABORER CLASSIFICATIONS

GROUP 1: General Laborer

GROUP 2: Work in septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on bottom of sewer trenches on the final grading, laying or caulking of performed sectional sewer pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives.

GROUP 3: Brick mason and plasterer tenders.

GROUP 4: Dynamite and powder men.

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PAIN0058B	05/01/1998		
		Rates	Fringes
BOND, CALHOUN, <b>CLINTON</b> , GREENE, JERSEY, MACOUPIN, MADISON, MONROE, MONTGOMERY, ST. CLAIR, & WASHINGTON COUNTIES			
INDUSTRIAL:			
BRUSH		21.87	5.25
SPRAYING BLASTING			
STEAM CLEANING		23.87	5.25

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PAIN0058C	05/01/1998		
		Rates	Fringes
BOND, CALHOUN, <b>CLINTON</b> , GREENE, JERSEY, MACOUPIN, MADISON, MONROE, MONTGOMERY, ST. CLAIR, & WASHINGTON COUNTIES			
BRIDGES:			

BRUSH	23.87	5.25
SPRAY + BLAST	23.87	5.25

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\* PLAS0090A 08/01/1998

	Rates	Fringes
BOND, CALHOUN, <b>CLINTON</b> (W 1/2, EAST TO BUT NOT INCL. CARYLE), GREENE, JERSEY, MACOUPIN, MADISON, MONROE, MONTGOMERY, & ST. CLAIR COUNTIES:		
CEMENT MASONS	22.10	8.60

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PLAS0143G 08/01/1998

	Rates	Fringes
WASHINGTON COUNTY:		
CEMENT MASONS	25.70	4.65

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PLAS0667A 04/01/1993

	Rates	Fringes
<b>CLINTON</b> (E 1/2 INCLUDING CARYLE) COUNTY		
CEMENT MASONS	19.75	2.25

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TEAM0001I 05/01/1997

	Rates	Fringes
TRUCK DRIVERS:		
GROUP 1	19.465	4.36+A
GROUP 2	19.865	4.36+A
GROUP 3	20.065	4.36+A
GROUP 4	20.315	4.36+A
GROUP 5	21.065	4.36+A

FOOTNOTE FOR TRUCK DRIVERS:

A: \$85.00 per week

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Drivers on 2 Axle Trucks Hauling Less Than 9 Tons. Air Compressor and Welding Machines & Brooms, Including Those Pulled by Separate Units, Warehousemen, Greasers & Tiremen, Pickup Trucks When Hauling Material, Tools, or Men to and from & on the Job Site, & Fork Lifts up to 6,000 LB. Capacity.

GROUP 2: Two or Three Axle Trucks Hauling more than 9 tons But Hauling less than 16 Ton, A-Frame Winch Trucks, Hydrolift Trucks, or Similar Equipment When Used For Transportation Purposes. Fork Lifts over 6,000 LB. Capacity, Winch Trucks, & Four Axle Combination Units.

GROUP 3: Two, Three or Four Axle Trucks Hauling 16 tons or more, Drivers on Water Pulls. Five Axle or more Combination Units.

GROUP 4: Lowboy & Oil Distributors.

GROUP 5: Drivers who require special protective clothing while employed on hazardous waste work.

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(v)).

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In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U. S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U. S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION



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SECTION 00800 - SPECIAL CLAUSES

1. COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984). FAR 52.211-10. The Contractor shall be required to:

a. commence work under this contract within 15 calendar days after the date the Contractor receives the Notice to Proceed,

b. prosecute said work diligently, and

c. complete the entire work ready for use not later than 120 calendar days after the date the Contractor receives the Notice to Proceed. The time stated for completion shall include final cleanup of the premises.

2. LIQUIDATED DAMAGES - CONSTRUCTION (APR 1984). FAR 52.211-12

a. If the Contractor fails to complete the work within the time specified in the contract, or any extensions, the Contractor shall pay the Government as liquidated damages, the sum of \$340.00 for each day of delay.

b. If the Government terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final completion of the work together with any increased cost occasioned the Government in completing the work.

c. If the Government does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages until the work is completed or accepted.

3. CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS (DEC 1991). DFARS 252.236-7001

(a) The Government--

(1) Will provide the Contractor, without charge, five sets of large-scale contract drawings and specifications except publications incorporated into the technical provisions by reference

(2) Will furnish additional sets on request, for the cost of reproduction; and

(3) May, at its option, furnish to the Contractor the contract drawings, maps, and specifications on CD-ROM in lieu of the drawings in paragraph (a)(1) of this clause.

(b) The Contractor shall--

(1) Check all drawings furnished immediately upon receipt

(2) Compare all drawings and verify the figures before laying out the work;

(3) Promptly notify the Contracting Officer of any discrepancies; and

(4) Be responsible for any errors which might have been avoided by complying with this paragraph (b).

(c) Large scale drawings shall, in general, govern small scale drawings. Figures marked on drawings shall, in general, be followed in preference to scale measurements.

(d) Omissions from the drawings or specifications or the misdescription of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work, but shall be performed as if fully and correctly set forth and described in the drawings and specifications.

(e) The work shall conform to the specifications and the contract drawings identified on the following index of drawings:

<u>Title</u>	<u>Drawing No.</u>
Carlyle Lake, Boat Ram and Road At Dam West Access Area, General Drawings, Project Location, Vicinity Map and Index of Drawings	K-C-3/G-1

4. NOT USED.

5. PAY REQUESTS. Pay requests authorized in the Contract Clause entitled "Payments Under Fixed-Price Construction Contracts", will be paid pursuant to the clause entitled "Prompt Payment for Construction Contracts". Pay requests shall be submitted on ENG Form 93 and 93a, "Payment Estimate-Contract Performance" and "Continuation", respectively. All information and substantiation required by the identified contract clauses shall be submitted with the ENG Form 93, and the required certification shall be included on the last page of the ENG Form 93a, signed by an authorized official of the Contractor and dated when signed. The designated billing office is the Office of the Area Engineer.

6. PHYSICAL DATA (APR 1984). FAR 52.236-4. Data and information furnished or referred to below is furnished for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

a. Physical Conditions. The indications of physical conditions on the drawings and in the specifications are the result of site investigations by surveys.

b. Weather Conditions. Information with respect to temperatures and precipitation may be obtained from the National Weather Service.

c. Transportation Facilities. Railroads and highways serve the general area of the work.

7. WORK AREAS. In accordance with the Contract Clause entitled, "Operations and Storage Areas", and subject to the approval of the Contracting Officer and the restrictions imposed by SECTION 01130 - ENVIRONMENTAL PROTECTION, of the Technical Provisions, the Contractor will be allowed use of Government-controlled land within the construction limits shown on the drawings or as specified herein. Any additional land, including ingress and egress, required by the Contractor, shall be obtained by the Contractor at its own expense.

8. PUBLIC UTILITIES AND PRIVATE IMPROVEMENTS.

a. Unless otherwise specified, shown on the drawings, or stated in writing by the Contracting Officer, the Contractor shall not move or disturb any public utilities or private improvements. Such removals, alterations, and/or relocations, where necessary, will be made by others. The locations shown on the drawings for underground utilities are approximate only. The exact locations of such utilities shall be determined by the Contractor in the field prior to commencing construction operations in their vicinity.

b. The attention of the Contractor is directed to the possibility that public utilities or private improvements may be encountered within the construction limits, some of which may be buried, and the existence of which is presently not known. Should any such utilities or improvements be encountered, the Contractor shall immediately notify the Contracting Officer so that a determination may be made as to whether they shall be removed, relocated, or altered. After such determination is made, the Contractor shall, if so directed by the Contracting Officer, remove, relocate, or alter them as required and an equitable adjustment will be made. In the event the Contracting Officer arranges for such removals, alterations, or relocations to be performed by others, the Contractor shall cooperate with such others during the latter's removal, alteration, or relocation operations.

9. DAMAGE TO WORK. The responsibility for damage to any part of the permanent work shall be as set forth in the Contract Clause entitled "Permits and Responsibilities." However, if in the judgment of the Contracting Officer any part of the permanent work performed by the Contractor is damaged by flood or earthquake, which damage is not due to the failure of the Contractor to take reasonable precautions or to exercise sound engineering and construction practices in the conduct of the work, the Contractor shall make the repairs as ordered by the Contracting Officer and full compensation for such repairs will be made at the applicable contract unit or lump sum prices as fixed and established in the contract. If in the opinion of the Contracting Officer there are no contract unit or lump sum prices applicable to any part of such work, an equitable adjustment pursuant to the Contract Clause entitled, "Changes," of the contract will be made as full compensation for the repairs of that part of the permanent work for which there are no applicable contract unit or lump sum prices. Except as herein provided, damage to all work (including temporary construction), utilities, materials, equipment, and plant shall be repaired to the satisfaction of the Contracting Officer at the Contractor's expense, regardless of the cause of such damage.

10. LAYOUT OF WORK.

a. The Government will establish the following base lines and bench marks at the site of the work:

(1) One vertical bench mark;

(2) Minimum of two horizontal control points will be recovered/flagged in the field.

b. From the base lines and bench marks established by the Government, the Contractor shall complete the layout of the work and shall be responsible for all measurements that may be required for the execution of the work to the location and limit marks prescribed in the specifications or on the contract drawings, subject to such modifications as the Contracting Officer may require to meet changed conditions or as a result of necessary

modifications to the contract work.

c. The Contractor shall furnish at its own expense such stakes, templates, platforms, equipment, tools and material, and all labor as may be required in laying out any part of the work from the base lines and bench marks established by the Government. It shall be the responsibility of the Contractor to maintain and preserve all stakes and other marks established by the Contracting Officer until authorized to remove them, and if such marks are destroyed by the Contractor or through its negligence prior to their authorized removal, they may be replaced by and at the discretion of, the Contracting Officer, and the expense of replacement will be deducted from any amounts due or to become due the Contractor. The Contracting Officer may require that work be suspended at any time when location and limit marks established by the Contractor are not reasonably adequate to permit checking of the work.

11. NOT USED

12. PARTIAL PAYMENT. At the discretion of the Contracting Officer, partial payment will be made for equipment delivered and stored on site or off site providing such storage is in accordance with the provisions of these specifications and the Contractor furnishes satisfactory evidence that title to such equipment has been acquired and that it will be utilized on the work covered by these specifications. Partial payment is defined as the invoice amount plus shipping costs. If the equipment is stored off site, the Government shall have the right to inspect the equipment.

13. NOT USED.

14. CERTIFICATES OF COMPLIANCE. Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in 3 copies. Each certificate shall include the signature and title of an official authorized to certify in behalf of the manufacturing company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Contractor from responsibility for furnishing satisfactory material if, after tests are performed on selected samples, the material is found not to meet the specific requirements.

15. PURCHASE ORDERS. Two copies of all purchase orders for other than stock materials showing the firm names and addresses and list of material shall be furnished to the Contracting Officer or an authorized representative as soon as issued.

16. SAFETY AND HEALTH REQUIREMENTS MANUAL EM 3851-1. Safety and Health Requirements Manual EM 3851-1, dated September 3, 1996, forms a part of these specifications.

17. ACCIDENT INVESTIGATIONS AND REPORTING. Refer to EM 3851-1, Paragraph 01.D. Accidents shall be investigated and reports completed by the immediate supervisor of the employee(s) involved and reported to the Contracting Officer or an authorized representative within one working day after the accident occurs. The accident investigation report shall be made on ENG Form 3394.

18. ACCIDENT PREVENTION PROGRAM. Refer to Contract Clause FAR 52.236-13 entitled, "Accident Prevention". Within 15 days after receipt of Notice of Award of the contract, and at least 7 days prior to the prework conference, the original and one copy of the Accident Prevention Program shall be submitted to the Contracting Officer for review. The program shall be prepared in the following format:

- a. An executed LMV Form 358R, Administrative Plan.
- b. An executed LMV Form 359R, Activity Hazard Analysis.
- c. A copy of company policy statement of accident prevention and any other guidance statements normally provided new employees. Each company employee shall be required to sign the company policy statement of accident prevention to verify that all employees have been informed of the safety program, and such signed statements shall be maintained at the project site.

The Contractor shall not commence physical work at the site until the program has been reviewed and found acceptable by the Contracting Officer, or an authorized representative. At the Contracting Officer's discretion, the Contractor may submit its Activity Hazard Analysis only for the first phase of construction provided that it is accompanied by an outline of the remaining phases of construction. All remaining phases shall be submitted and accepted prior to the beginning of work in each phase. Also refer to Section 1 of EM 385-1-1.

19. DAILY INSPECTIONS. The Contractor shall perform daily safety inspections and record them on the forms approved by the Contracting Officer. Reports of daily inspections shall be maintained at the job site. The reports shall be records of the daily inspections and resulting actions. Each report shall include, as a minimum, the following:

- a. Phase(s) of construction underway during the inspection.
- b. Locations of areas inspections were made.
- c. Results of inspection, including nature of deficiencies observed and corrective actions taken, or to be taken, date, and signature of the person responsible for its contents.

20. BASIS FOR SETTLEMENT OF PROPOSALS. EFARS 52.249-5000 Actual costs will be used to determine equipment cost for a settlement proposal submitted on the total cost basis under FAR 49.206-2(b). In evaluating a termination settlement proposal using the total cost basis, the following principles will be applied to determine allowable equipment costs:

- (1) Actual costs for each piece of equipment, or groups of similar serial or series equipment, need not be available in the Contractor's accounting records to determine total actual equipment costs.
- (2) If equipment costs have been allocated to a contract using predetermined rates, those charges will be adjusted to actual costs.
- (3) Recorded job costs adjusted for unallowable expenses will be used to determine equipment operating expenses.
- (4) Ownership costs (depreciation) will be determined using the Contractor's depreciation schedule (subject to the provisions of FAR 31.205-11).

(5) License, taxes, storage and insurance costs are normally recovered as an indirect expense and unless the Contractor charges these costs directly to contracts, they will be recovered through the indirect expense rate.

## 21. ENVIRONMENTAL LITIGATION.

(a) If the performance of all or any part of the work is suspended, delayed, or interrupted due to an order of a court of competent jurisdiction as a result of environmental litigation, as defined below, the Contracting Officer, at the request of the Contractor, shall determine whether the order is due in any part to the acts or omissions of the Contractor or a Subcontractor at any tier not required by the terms of this contract. If it is determined that the order is not due in any part to acts or omissions of the Contractor or a Subcontractor at any tier other than as required by the terms of this contract, such suspension, delay, or interruption shall be considered as if ordered by the Contracting Officer in the administration of this contract under the terms of the Contract Clause entitled "Suspension of Work". The period of such suspension, delay or interruption shall be considered unreasonable, and an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) as provided in that clause, subject to all the provisions thereof.

(b) The term "environmental litigation", as used herein, means a lawsuit alleging that the work will have an adverse effect on the environment or that the Government has not duly considered, either substantively or procedurally, the effect of the work on the environment.

## 22. TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER.

a. This provision specifies the procedure for the determination of time extensions for unusually severe weather in accordance with the Contract Clause entitled, "Default (Fixed Price Construction)". In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

(1) The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.

(2) The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.

b. The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The Contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

### MONTHLY ANTICIPATED ADVERSE WEATHER DELAY WORK DAYS BASED ON (5) DAY WORK WEEK

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
(8)	(8)	(6)	(6)	(5)	(5)	(5)	(5)	(5)	(6)	(6)	(6)



c. Upon acknowledgement of the Notice to Proceed (NTP) and continuing throughout the contract, the Contractor shall record on the daily CQC report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the Contractor's scheduled work day. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in paragraph b, above, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days, and issue a modification in accordance with the Contract Clause entitled "Default (Fixed Price Construction)".

23. SUBCONTRACTS. In accordance with the Contract Clause entitled "Subcontracts", the Contractor shall, within seven days after the award of any subcontract by the Contractor or a Subcontractor, deliver to the Contracting Officer two copies of a completed Standard Form 1413. Both copies must contain the original signatures of both parties.

24. REQUIRED INSURANCE.

a. As required by the Contract Clause entitled "Insurance Work on a Government Installation", the Contractor shall within 15 days after receipt of Notice of Award and prior to the commencement of work, furnish to the Contracting Officer, a written statement as evidence of the following minimum insurance:

(1) Workmen's Compensation. Amounts required by applicable jurisdictional statutes.

(2) Employer's Liability Insurance. \$100,000

(3) Comprehensive General Liability Insurance

Bodily Injury - \$500,000 per occurrence

(4) Comprehensive Automobile Insurance

Bodily Injury - \$200,000 each person  
\$500,000 each accident

Property Damage - \$ 20,000 each accident

b. Statements of insurance should be submitted to the following address:

Department of the Army  
St. Louis District, Corps of Engineers  
Central Area Office; CEMVS-CO-CA  
301 Riverlands Way  
p.o. Box 337  
West Alton, Missouri 63386-0337

25. PROTECTION OF MATERIAL AND WORK. The Contractor shall at all times protect and preserve all materials, supplies, and equipment of every description (including property which may be Government-furnished or owned) and all work performed. All reasonable requests of the Contracting Officer to

enclose or specially protect such property shall be complied with. If, as determined by the Contracting Officer, material, equipment, supplies, and work performed are not adequately protected by the Contractor, such property may be protected by the Government and the cost thereof may be charged to the Contractor or deducted from any payments due to the Contractor.

26. CONTAMINATION OF WATER. In addition to the requirements set forth in 01130-3.3, Protection of Water Resources, the Contractor shall take positive protective measures to prevent spillage of potential pollutant materials such as fuel, emulsion materials, chemicals etc., from storage containers or equipment, into lakes or tributary waters. Such positive protective measures may include, but not limited to, the following:

(1) A berm enclosure of sufficient capacity to contain such materials.

(2) Security measures to prevent acts of vandalism which could result in spillage of such materials (fences, guards, etc.).

(3) Storage of such materials in an area where the terrain would preclude leakage into lake or tributary waters.

(4) Utilization of secure Government storage areas if the Contracting Officer indicates such space is available. No storage past immediate needs (2 days) without the consent of the Contracting Officer.

The Contractor shall submit its proposals for implementing the above provisions in accordance with 01130-1.5, Environmental Protection Plan.

27. EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE. (MAR 1995)  
EFARS 52.231-5000

(a) This clause does not apply to terminations. See 52.249-5000, Basis for settlement of proposals, and FAR Part 49.

(b) Allowable cost for construction and marine plant and equipment in sound workable condition owned or controlled and furnished by a Contractor or Subcontractor at any tier shall be based on actual cost data for each piece of equipment or equipment groups of similar serial and series for which the Government can determine both ownership and operating costs from the Contractor's accounting records. When both ownership and operating costs cannot be determined for any piece of equipment or groups of similar serial or series equipment from the Contractor's accounting records, costs for that equipment shall be based upon the applicable provisions of EP 11101-8, Construction Equipment Ownership and Operating Expense Schedule, Region V. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the Contracting Officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retroactive pricing, the schedule in effect at the time the work was performed shall apply.

(c) Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d)(ii) and FAR 31.205-36. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-leaseback arrangements will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar

equipment to unaffiliated lessees.

(d) When actual equipment costs are proposed and the total amount of the pricing action exceeds the small purchase threshold, the Contracting Officer shall request the Contractor to submit either certified cost or pricing data, or partial/limited data, as appropriate. The data shall be submitted on Standard Form 1411, Contract Pricing Proposal Cover Sheet.

28. COMMERCIAL WARRANTY. The Contractor agrees that the standard commercial equipment furnished under this contract shall be covered by the most favorable commercial warranties the manufacturer gives to any customer for such equipment, and that the rights and remedies provided herein are in addition to and do not limit any rights afforded to the Government by any other clause of this contract. The Contractor shall furnish two copies of the warranties to the Contracting Officer.

29. ORDER AND COORDINATION OF WORK. The Contractor may start and complete the work in such order and sequence as desired subject to compliance with the following paragraphs:

a. The Contractor shall schedule his operations so the existing multilane boat ramp will remain operational except as specified below.

b. The access to the boat ramp shall be interrupted for a period Monday through Thursday, once during the life of the contract so the sewer line may be constructed across the entrance road. The Contractor shall coordinate the closing with the Contracting Officer and prominently display the closure date for the period of not less than two weeks before the closure is scheduled.

c. Parking on a minimum of one-half of the parking area shall be maintained during the life of the contract.

d. Sewer service to the West Access marina shall be interrupted for a period not to exceed 24 hours, once during the life of the contract, so the connections to the lift station may be made. This interruption shall be scheduled on a Tuesday or Wednesday. The Contractor shall coordinate the closing with the Contracting Officer and notify the Contracting Officer, not less than two weeks before the interruption is scheduled.

30. NOT USED.

31. AS-BUILT DRAWINGS.

a. "As-Built" Contract Drawings. The Contractor shall maintain a separate set of full-size contract drawings, marked up in red, to indicate as-built conditions. Each as-built contract drawing shall include the Contract Number (DACW43-XX-C-XXXX) associated with the contract. These drawings shall be maintained in a current condition at all times until completion of the work and shall be available for review by Government personnel at all times. All variations from the contract drawings, for whatever reason, including those occasioned by modifications, optional materials, and the required coordination between trades, shall be indicated. These variations shall be shown in the same general detail utilized in the contract drawings. Upon completion of the work, two (2) sets of the markedup drawings shall be furnished to the Contracting Officer prior to acceptance of the work. The Government will withhold two percent of the total bid price of the items for which as-built contract drawings have not been submitted.

b. "As-Built" Shop Drawings. Upon completion of items of work, the

Contractor shall revise the shop drawings to show "as-built" conditions. The notation "Revised to show 'as-built' conditions" shall be placed in red in the lower right corner of each drawing along with the initials of a responsible company representative. Each as-built shop drawing or catalog cut shall be identified by the Contract Number (DACW43-XX-C-XXXX) associated with the contract, and corresponding transmittal number from ENG Form 4025. "Asbuilt" shop drawings of each Contractor-prepared construction drawing should be prepared as soon as possible after the construction detailed on a given drawing has been completed. After the "as-built" shop drawings have been prepared as described above and within 15 days after the contract completion date, the Contractor shall submit four (4) complete sets of asbuilt shop drawings, including catalog cuts, to the Contracting Officer. The Government will withhold two percent of the total bid price of the item for which as-built shop drawings have not been submitted.

32 THRU 39. NOT USED.

40. STONE SOURCES.

a. On the basis of information and data available to the Contracting Officer, stone meeting the quality requirements of these specifications has been produced from the sources listed at the end of these Special Clauses.

b. Stone may be furnished from any of the currently listed sources or, at the option of the Contractor, may be furnished from any other source designated by the Contractor and accepted by the Contracting Officer, subject to the conditions hereinafter stated.

c. It is the Contractor's responsibility to determine that the stone source or combination of sources selected are capable of supplying the quantities and gradation needed and at the rate needed to maintain the scheduled progress of the work.

d. After the award of the contract, the Contractor shall designate in writing only one source or one combination of sources from which stone will be furnished. If the Contractor proposes to furnish stone from a source not currently listed, only a single additional source for stone may be designated. Samples for acceptance testing shall be provided as required by SECTION 02270. If a source for stone so designated by the Contractor is not accepted for use by the Contracting Officer, the Contractor may not propose other sources but shall furnish the stone from a source listed at no additional cost to the Government.

e. Acceptance of a source of stone is not to be construed as acceptance of all material from that source. The right is reserved to reject materials from certain localized areas, zones, strata, or channels when such materials are unsuitable for stone as determined by the Contracting Officer. Materials produced from a listed or unlisted source shall meet all the requirements of SECTION 02270, of the Technical Provisions of these specifications.

41 THRU 43. NOT USED.

44. WARRANTY OF CONSTRUCTION (MAR 1994). FAR 52.246-21 (ALTERNATE I) (APR 1984)

a. In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph i of this clause, that

work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

b. This warranty shall continue for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

c. The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Government-owned or controlled real or personal property, when that damage is the result of-

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished.

d. The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

e. The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

f. If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Government shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall-

(1) Obtain all warranties that would be given in normal commercial practice;

(2) Require all warranties to be executed, in writing, for the benefit of the Government, if directed by the Contracting Officer; and

(3) Enforce all warranties for the benefit of the Government, if directed by the Contracting Officer.

h. In the event the Contractor's warranty under paragraph b of this clause has expired, the Government may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

i. Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of any damage that results from any defect in Government-furnished material or design.

j. This warranty shall not limit the Government's rights under the

Inspection of Construction clause of this contract with respect to latent defects, gross mistakes, or fraud.

k. Defects in design or manufacturer of equipment specified by the Government on a "brand name and model" basis, shall not be included in this warranty. In this event, the Contractor shall require any subcontractors, manufacturers, or suppliers thereof to execute their warranties, in writing, directly to the Government.

45. YEAR 2000 COMPLIANCE (Y2K). In accordance with FAR 39.106, the Contractor shall ensure that with respect to any design, construction, goods or services under this contract as well as any subsequent task/delivery orders issued under this contract (if applicable), all information technology contained therein shall be Year 2000 compliant. The Contractor shall:

(a) Perform, maintain, and provide an inventory of all major components to include structures, equipment, items, parts, and furnishings under this contract and each task/delivery order that may be affected by the Y2K compliance requirement;

(b) Indicate whether each component is currently Year 2000 compliant or requires an upgrade for compliance prior to Government acceptance.

46. HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (JAN 1997). FAR 52.223-3

(a) "Hazardous material", as used in this clause, includes any material defined as hazardous under the latest version of Federal Standard No. 313 (including revisions adopted during the term of the contract).

(b) The offeror must list any hazardous material, as defined in paragraph (a) of this clause, to be delivered under this contract. The hazardous material shall be properly identified and include any applicable identification number, such as National Stock Number or Special Item Number. This information shall also be included on the Material Safety Data Sheet submitted under this contract.

Material (If none, insert "None")

Identification No.

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

(c) This list must be updated during performance of the contract whenever the Contractor determines that any other material to be delivered under this contract is hazardous.

(d) The apparently successful offeror agrees to submit, for each item as required prior to award, a Material Safety Data Sheet, meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous material identified in paragraph (b) of this clause. Data shall be submitted in accordance with Federal Standard No. 313, whether or not the apparently successful offeror is the actual manufacturer of these items. Failure to submit the Material Safety Data Sheet prior to award may result in the apparently successful offeror being considered nonresponsive and ineligible for award.

(e) If, after award, there is a change in the composition of the

item(s) or a revision to Federal Standard No. 313, which renders incomplete or inaccurate the data submitted under paragraph (d) of this clause, the Contractor shall promptly notify the Contracting Officer and resubmit the data.

(f) Neither the requirements of this clause nor any act or failure to act by the Government shall relieve the Contractor of any responsibility or liability for the safety of Government, Contractor, or subcontractor personnel or property.

(g) Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, State, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material.

(h) The Government's rights in data furnished under this contract with respect to hazardous material are as follows:

(1) To use, duplicate and disclose any data to which this clause is applicable. The purposes of this right are to-

(i) Apprise personnel of the hazards to which they may be exposed in using, handling, packaging, transporting, or disposing of hazardous materials;

(ii) Obtain medical treatment for those affected by the material; and

(iii) Have others use, duplicate, and disclose the data for the Government for these purposes.

(2) To use, duplicate, and disclose data furnished under this clause, in accordance with subparagraph (h)(1) of this clause, in precedence over any other clause of this contract providing for rights in data.

(3) The Government is not precluded from using similar or identical data acquired from other sources.

47. PARTNERING. In order to most effectively accomplish this contract, the Government is willing to form a cohesive partnership with the Contractor. This partnership would strive to draw on the strengths of each organization in an effort to achieve a quality project done right the first time, within budget, and on schedule. This partnership would be bilateral in make-up and partnership will be totally voluntary. Any cost associated with effectuating this partnership will be agreed to by all parties and will be shared equally with no change in contract price.

xxx

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STONE SOURCES  
ST. LOUIS DISTRICT

Source No.	Producer	MRM*	Lat.	Long.
1.	Tower Rock Stone Co., Grays Point, Mo.	47.0	37N	89W
2.	West Lake Quarry, Neely's Landing, Mo.	71.5	37N	89W
3.	Tower Rock Stone Co., Ste Genevieve Mo.	127.6	38N	90W
4.	Plattin Quarry, Ste. Genevieve, Mo.	139.0	38N	90W
5.	Mississippi Lime Quarry, Ste. Genevieve, Mo.	155.0	38N	90W
6.	Barnhart Limestone Inc., Barnhart, Mo.	156.0	38N	90W
7.	Bussen Quarry, St. Louis County, Mo.	168.0	38N	90W
8.	Bellefontaine Quarry, Fort Bellefontaine, Mo.	8.0**	38N	90W
9.	Fort Belle Quarry, Ft. Bellefontaine, Mo.	7.0**	38N	90W
10.	Calhoun Quarry, Batchtown, Ill.	241.0	38N	90W
11.	Wayne Smith Quarry, Louisiana, Mo.	281.0	39N	91W
12.	Anna Quarry, Anna, Ill.		37N	89W
13.	Bussen Quarry, Eureka, Mo.		38N	90W
14.	Calender Quarry, Pittsfield, Ill.		39N	90W
15.	Central Stone Quarry #1, Huntington, Mo.		39N	91W
16.	Central Stone Quarry #9, Perry, Mo.		39N	91W
17.	Central Stone Quarry #33, Florence, Ill.		39N	91W
18.	Columbia Quarry Co. #15, Cypress, Ill.		37N	89E
19.	Charleston Stone Co., Charleston, Ill.		39N	88W
20.	Columbia Quarry #1, Columbia, Ill.		38N	90W
21.	Columbia Quarry #9, Dupo, Ill.		38N	90W

Source No.	Producer	MRM*	Lat.	Long.
22.	Falling Spring Quarry Co., Falling Springs, Ill.		38N	90W
23.	Magruder Quarry, Troy, Mo.		38N	90W
24.	Fred Weber Inc., Winfield Mo.		38N	90W
25.	Bluff City Mineral, E. Alton, Ill.		38N	90W
26.	Columbia Quarry Co. #7, Waterloo, Ill.		38N	90W
27.	Seminole Ag. Lime Co., Dexter, Mo.		37N	90W
28.	S-S-S Inc., New London, Mo.		39N	91W
29.	South East Mo. Stone Co., Cape Girardeau, Mo.		37N	89W
30.	Bessell Mineral Products Inc., Bonne Terre, Mo.		37N	90W
31.	Williamsville Stone Co., Poplar Bluff, Mo.		36N	90W
32.	Nokomis Quarry, Nokomis, Ill.		39N	89W
33.	Brickeys Stone Co., Bloomsdale, Mo.	136.0	38N	90W

\* Mississippi River Mile

\*\* Missouri River Mile

#### SOURCES FOR CONTRACTOR-FURNISHED BORROW

1. Schaefer Contracting, 19370 Sand Ridge Road, Carlyle, IL 62231
2. Keyesport Sand and Gravel, RR 1, Box 27, Keyesport, IL 62253
3. Buehne Sand and Gravel, LTD, 141 Mulberry Grove Rd., Keyesport, IL 62253

# ACCIDENT PREVENTION PROGRAM ADMINISTRATIVE PLAN

Willingness to correct safety hazards detected by the Corps is commendable, but a poor substitute for a positive program that prevents or detects and corrects hazards.

Contractor		Contract Name & No.		Date
1	2		3	
Project Superintendent		Shifts/day	Hours/shift	Maximum employees/shift
4	5	5a	5b	
Superintendent's training in Corps' safety requirements				
6				
Major Units of Equipment				
7				
Who will inspect equipment?		Inspector's qualifications		Inspection frequency?
8	8a		8b	
Who is responsible for operators' physicals?		Location of all records		Day and hour weekly safety meeting
9	10		11	
Who is responsible for employee training?		Who will orient new employees?		
12	13			
Who is responsible for clean-up?		Where will drinking water be obtained?		
14	15			
Who will investigate accidents?		Who is responsible for providing personal protective equipment?		
16	17			
Name Doctors, Hospitals & Ambulance services with whom arrangements have been made for this contract.				
Doctor		Hospital		Ambulance
18		18a		18b
What form of communication will be used to summon ambulance?				
18c				

Names of first aid attendants having certificates				Type of certificate and expiration date		Names of U.S.C.G. licensed boat operators, type license & expiration date	
19				19a		20	
21 Fire Fighting Equipment				22 First Aid Kits		23 Wash Facilities	
No.	Rating	Type	Location	No.	Type	No.	Type
				24 Toilets			
				No.	Type		

What flammable or combustible liquids or gases will be on job site?

25

Where and how will flammables and combustibles be stored?

26

Who will be responsible for inspection and maintenance of fire fighting equipment?

27

If the Company has a published statement of safety policy, please transmit a copy with the return of your Accident Prevention Program.

On a separate sheet submit your proposed layout of temporary buildings and facilities (including subcontractors) and traffic patterns including access roads, haul roads, R.R.s, utilities, etc.

The \_\_\_\_\_ will pursue a positive program of training,  
(Company)  
inspections and hazard control throughout the term of this contract. Mr./Ms. \_\_\_\_\_  
has the responsibility and authority for enforcing them.

\_\_\_\_\_

Contractor's signature

\_\_\_\_\_

date

\_\_\_\_\_

C.O. or C.O.R. signature

\_\_\_\_\_

date

28

## ACCIDENT PREVENTION PROGRAM ACTIVITY HAZARD ANALYSIS

1. Contract No.	2. Contract Name	3. Corps Command
4. Date	5. Location	6. Estimated Start Date
7. Activity	8. Analyzed by	9. Hazard Analysis Phase & Date
10. Principal Steps of Operation	11. Potential Hazards	12. Precautionary Actions or Controls To Be Implemented
<div> <div>13. Contractor/Superintendent or Safety Officer (Signature &amp; date)</div> <div>14. Contractor/Project Manager or Representative (Signature &amp; date)</div> </div>		

## INSTRUCTIONS FOR COMPLETION OF LMV Form 359-R

Item Number	Instruction
1.	Self-explanatory
2.	Self-explanatory
3.	The Area, Resident, Project, or Field Office administering the contract.
4.	Date Hazard Analysis is prepared.
5.	Location of contract or where activity is to be performed.
6.	Estimated start date of the activity being analyzed.
7.	Activity refers to the specific phase of work being analyzed, (i.e., clearing & grubbing, stone placement, form erection, electrical installation, pile driving, etc.).
8.	The person making the analysis, typically the foreman in charge of the activity or the Contractor's Quality Control or Safety Officer.
9.	If this is the initial Hazard Analysis for this activity, indicate "Initial." If this is an updated analysis for this activity, indicate "Update." Hazard Analysis should be reviewed and updated at preparatory inspection. Show date discussed.
10.	The principal steps of operation for the activity should be identified in the sequence in which they occur. All major pieces of equipment used in each step of the operation should be identified.
11.	The hazards associated with each step should be identified.
12.	Precautionary actions and controls should be specific to the hazard identified. They should be what the contractor actually intends to implement and enforce, not general comments such as, "work will be done in accordance with EM 385-1-1." Inspection procedures for equipment identified in item 10 should be stated in this item, as well as training requirements for personnel involved.
13.	Analysis should be signed by the Contract Superintendent or Safety Officer.
14.	Contractor/Project Manager should sign and date.

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## PART 2 PRODUCTS (NOT APPLICABLE)

## PART 3 EXECUTION (NOT APPLICABLE)

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## SECTION 01025 - MEASUREMENT AND PAYMENT

## PART 1 GENERAL

1.1 CLEARING, GRUBBING AND STRIPPING. Clearing, grubbing and stripping will not be measured for payment. Payment for clearing, grubbing and stripping will be made at the contract sum job price for "Clearing, Grubbing and Stripping", which price and payment shall constitute full compensation for furnishing all plant, labor, equipment, and material necessary to perform all operations for clearing, grubbing and stripping as specified in SECTION 02220 - CLEARING, GRUBBING AND STRIPPING, and as shown on the drawings.

1.2 STORM SEWER. Payment for excavation, trenching and backfilling and concrete pipe and appurtenances will be made at the contract sum job price for "Storm Sewer", which price and payment shall constitute full compensation for furnishing all plant, labor, equipment, and material necessary to perform all operations for excavation, trenching and backfilling and concrete pipe and appurtenances as specified in SECTION 02221 - EXCAVATION, TRENCHING, AND BACKFILLING FOR WASTEWATER COLLECTION SYSTEM and in SECTION 02611 - REINFORCED CONCRETE DRAIN PIPE, and as shown on the drawings.

1.3 EARTHWORK. Earthwork will not be measured for payment. Payment for earthwork will be made at the contract sum job price for "Earthwork", which price and payment shall constitute full compensation for furnishing all plant, labor, equipment, and material necessary to perform all operations for earthwork as specified in SECTION 02222 - EARTHWORK and SECTION 02240 - GEOTEXTILE, and as shown on the drawings.

1.4. RIPRAP, BEDDING, CRUSHED STONE, ASPHALTIC CONCRETE.

1.4.1 Measurement. The stone materials will be measured for payment by the ton (2,000 pounds) with final quantities rounded to the nearest whole ton. Stone weight to be paid for will be determined from certified weight tickets which shall be furnished by the Contractor without additional cost to the Government. A certified weight ticket shall be defined as each truck being weighed empty, and again when loaded and the ticket, identified by the Contractor's name and the contract number, signed by the approved quarry representative with the statement "certified correct". This procedure shall be followed for each load hauled. The Contractor shall initial each ticket to verify the accuracy and completeness of each ticket before submitting it to the Government. Certification stating the scales were tested and approved by the local authority shall be furnished by the Contractor.

1.4.2 Payment. Payment for riprap, bedding, crushed stone and asphaltic concrete and demolition of asphaltic concrete will be made at the contract unit price per ton for "Riprap", "Bedding", "Crushed Stone", and "Asphaltic Concrete", which price and payment shall constitute full compensation for all costs of furnishing, transporting and placing the stone material required and for maintaining the work until acceptance as prescribed in SECTION 02270 - STONE PROTECTION and SECTION 02500 - ROADS and as shown on the drawings.

1.5 MISCELLANEOUS ITEMS (PAVEMENT MARKINGS, GUARDRAIL AND ACCESS GATE). Payment for costs associated with pavement markings, guardrail and access gate will be made at the contract sum job price for "Miscellaneous Items" which price and payment shall constitute full compensation for all costs associated with pavement markings, guardrail and access gate as specified in

the applicable portions of SECTION 02500 - ROADS, SECTION 02840 - GUARDRAIL AND ACCESS GATE, SECTION 09900 - PAINTING, and as shown on the drawings.

1.6 LIFT STATION. Payment for the lift station will be made at the contract sum job price for "Lift Station", which price and payment shall constitute full compensation for all costs associated with providing the lift station specified in SECTION 02710 - LIFT STATION and SECTION 15120 - VALVES AND GAGES, and as shown on the drawings.

1.7 GRAVITY SEWER LINE, 8-INCH.

1.7.1 Measurement. Gravity sewer line (8-inch) will be measured for payment by the linear foot of sewer line in place measured along the centerline of the pipe.

1.7.2 Payment. Payment for gravity sewer line will be made at the applicable contract unit price per linear foot for "Gravity Sewer Line, 8-Inch" which prices and payments shall constitute full compensation for furnishing and installing the sewer line including all accessories required as specified in SECTION 02730 - WASTEWATER COLLECTION SYSTEM, and as shown on the drawings.

1.8 MANHOLES. Payment for the manholes and demolition of existing manholes will be made at the contract sum job price for "Manholes", which prices and payments shall constitute full compensation for demolition of existing manholes and furnishing and installing the new manholes including all accessories required as specified in SECTION 02730 - WASTEWATER COLLECTION SYSTEM, and as shown on the drawings.

1.9 PRESSURE SEWER, 2-INCH

1.9.1 Measurement. Pressure sewer line (2-inch) will be measured for payment by the linear foot of sewer line in place measured along the centerline of the pipe.

1.9.2 Payment. Payment for the pressure sewer line will be made at the applicable contract unit price per linear foot for "Pressure Sewer Line, 2-Inch" which prices and payments shall constitute full compensation for furnishing and installing the sewer line including all accessories required as specified in SECTION 02740 - WASTEWATER PRESSURE SEWER SYSTEM, and as shown on the drawings.

1.10 ESTABLISHMENT OF TURF. Payment for establishing turf will be made at the contract sum job price for "Establishment of Turf", which price and payment shall constitute full compensation for the costs of all plant, labor materials and equipment necessary for establishing turf as specified in SECTION 02935 - ESTABLISHMENT OF TURF, and as shown on the drawings.

1.11 CONCRETE BOAT RAMP. Payment for providing the concrete boat ramp will be made at the contract sum job price for "Concrete Boat Ramp", which price and payment shall constitute full compensation for the costs of all plant, labor, materials and equipment required to furnish and install the concrete box culvert as specified in SECTION 03300 CONCRETE AND FORMWORK, and as shown on the drawings.

1.12 ELECTRICAL WORK. Payment for providing all electrical work will be made at the contract sum job price for "Electrical Work", which price and payment shall constitute full compensation for the costs of all plant, labor, materials and equipment required to furnish and install all electrical work as

specified in SECTION 16400 - ELECTRICAL WORK, and as shown on the drawings.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

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PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

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## SECTION 01090 - SOURCES FOR REFERENCE PUBLICATIONS

## PART 1 GENERAL

1.1 REFERENCES. Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title.

The document number used in the citation is the number assigned by the sponsoring organization, e.g. UL 1 (1985; Rev thru Nov 1992) Flexible Metal Conduit. However, when the sponsoring organization has not assigned a number to a document, an identifying number has been assigned for convenience, e.g. UL's unnumbered 1992 edition of their Building Materials Directory is identified as UL-01 (1992) Building Materials Directory. The sponsoring organization number (UL 1) can be distinguished from an assigned identifying number (UL-1) by the dash mark (-).

1.2 ORDERING INFORMATION. The addresses of the organizations whose publications are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided. Documents listed in the specifications with numbers which were not assigned by the sponsoring organization should be ordered from the source by title rather than by number.

1.2.1 See Paragraph entitled, "Availability of Specifications Listed in The DOD Index of Specifications and Standards (DODISS)", of the Instructions to Bidders for the availability of non-commercial specifications.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS  
(AASHTO)  
444 N. Capital St., NW, Suite 249  
Washington, DC 20001  
Ph: 202-624-5800  
Fax: 202-624-5806

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)  
11 West 42nd St  
New York, NY 10036  
Ph: 212-642-4900  
Fax: 212-302-1286

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)  
100 Barr Harbor Drive  
West Conshohocken, PA 19428-2959  
Ph: 610-832-9500  
Fax: 610-832-9555  
E-mail: cservice@astm.org

AMERICAN WATER WORKS ASSOCIATION  
(AWWA)  
6666 West Quincy  
Denver, CO 80235  
Ph: 800-926-7337  
Fax: 303-795-1989

CODE OF FEDERAL REGULATIONS (CFR)

Order from:

Government Printing Office

Washington, DC 20402

Ph: 202-783-3238

Fax: 202-275-7703

Internet: <http://www.pls.com:8001/his/cfr.html>

CORPS OF ENGINEERS (COE)

Order from:

U.S. Army Engineer Waterways Experiment Station

ATTN: Technical Report Distribution Section, Services  
Branch, TIC

3909 Halls Ferry Rd.

Vicksburg, MS 39180-6199

Ph: 601-634-2355

Fax: 601-634-2506

DEPARTMENT OF COMMERCE (DOC)

Order From:

National Technical Information Service

5285 Port Royal Road

Springfield, VA 22161

Ph: 703-487-4650

Fax: 703-321-8547

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

1300 N. 17th St., Suite 1847

Rosslyn, VA 22209

Ph: 703-841-3200

Fax: 202-457-8473

UNDERWRITERS LABORATORIES (UL)

333 Pfingsten Rd.

Northbrook, IL 60062-2096

Ph: 800-704-4050

Fax: 847-509-6249

PART 2 MATERIALS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

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SECTION 01130  
ENVIRONMENTAL PROTECTION

## PART 1 GENERAL

1.1 APPLICABLE PUBLICATIONS. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

1.1.1 Code of Federal Regulations (CFR).

40 CFR 261 Identification and listing of Hazardous Waste

1.1.2 Engineering Manuals (EM).

EM 385-1-1 U.S. Army Corps of Engineers Safety and Health Requirements Manual

1.2 DEFINITIONS. Environmental pollution and damage is defined as the presence of chemical, physical, or biological elements or agents that adversely affect human health or welfare; unfavorably alter ecological balances of plant or animal communities; or degrade the environment from an aesthetic, cultural or historic perspective. Environmental protection is the prevention/control of pollution and habitat disruption that may occur during construction. The control of environmental pollution and damage requires consideration of air, water, land, biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive materials; and other pollutants.

1.3 SUBMITTALS. Government approval is required for all submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01300 SUBMITTAL PROCEDURES:

1.3.1 Statements. Environmental Protection Plan; GA. Submit plan detailing Contractor's procedures for complying with all applicable environmental protection regulations and the special requirements of this contract.

1.4 ENVIRONMENTAL PROTECTION REQUIREMENTS. The Contractor shall comply with all applicable Federal, State, and local laws and regulations. The Contractor shall provide environmental protective measures and procedures to prevent and control pollution, limit habitat disruption, and correct environmental damage that occurs during construction.

1.4.1 Protection of Features. This section supplements the Contract Clause PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. The Contractor shall prepare a list of features requiring protection under the provisions of the contract clause which are not specially identified on the drawings as environmental features requiring protection. The Contractor shall protect those environmental features, indicated specially on the drawings, in spite of interference which their preservation may cause to the Contractor's work under the contract.

1.4.2 Permits. This section supplements the Contractor's responsibility under the contract clause PERMITS AND RESPONSIBILITIES to the extent that the Government has already obtained environmental permits. The Contractor shall comply with the terms, and conditions of these permits. The

Contractor shall also comply with other environmental commitments made by the Government. Copies of permit terms and conditions as well as those other commitments made by the Government are available for review as specified in SECTION 00800 SPECIAL CLAUSES, paragraph 00800-6.

1.4.3 Special Environmental Requirements. The Contractor shall comply with any special environmental requirements included at the end of this section. These special environmental requirements are an outgrowth of environmental commitments made by the Government during the project development.

1.4.4 Environmental Assessment of Contract Deviations The Contract specifications have been prepared to comply with the special conditions and mitigation measures of an environmental nature which were established during the planning and development of this project. The Contractor is advised that deviations from the drawings or specifications (e.g., proposed alternate borrow areas, disposal areas, staging areas, alternate access routes, etc.) could result in the requirement for the Government to reanalyze the project from an environmental standpoint. Deviations from the construction methods and procedures indicated by the plans and specifications which may have an environmental impact will require an extended review, processing, and approval time by the Government. The Contracting Officer reserves the right to disapprove alternate methods, even if they are more cost effective, if the Contracting Officer determines that the proposed alternate method will have an adverse environmental impact.

1.5 ENVIRONMENTAL PROTECTION PLAN. Within 15 calendar days of Notice of Award, the Contractor shall submit an Environmental Protection Plan for review and acceptance by the Contracting Officer. The Government will consider an interim plan for the first 30 days of operations. However, the Contractor shall furnish an acceptable final plan not later than 30 calendar days after receipt of the Notice to Proceed. The Contractor shall meet with representatives of the Contracting Officer to develop a mutual understanding relative to compliance with this section and administration of the environmental pollution control program. Acceptance is conditional and is predicated upon satisfactory performance during construction. The Government reserves the right to require the Contractor to make changes in the Environmental Protection Plan or operations if the Contracting Officer determines that environmental protection requirements are not being met. The plan shall detail the actions which the Contractor shall take to comply with all applicable Federal, State, and local laws and regulations concerning environmental protection and pollution control and abatement, as well as the additional specific requirements of this contract. No physical work at the site shall begin prior to acceptance of the Contractor's plan or an interim plan covering the work to be performed. The environmental protection plan shall include, but not be limited to, the following:

1.5.1 List of State and Local Laws and Regulations The Contractor shall provide as part of the Environmental Protection Plan a list of all State and local environmental laws and regulations which apply to the construction operations under the Contract.

1.5.2 Spill Control Plan. The Contractor shall include as part of the environmental protection plan, a Spill Control Plan. The plan shall include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by the Emergency Response and Community Right-to-Know Act or regulated under State or local laws or regulations. The Spill Control Plan supplements the requirements of EM 385-1-1. This plan shall include as a minimum:

a. The name of the individual who will be responsible for implementing and supervising the containment and cleanup.

b. Training requirements for Contractor's personnel and methods of accomplishing the training.

c. A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.

d. The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.

e. The methods and procedures to be used for expeditious contaminant cleanup.

f. The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual shall immediately notify the Contracting Officer in addition to the legally required Federal, State, and local reporting channels (including the National Response Center 1800-424-8802) if a reportable quantity spill occurs. The plan shall contain a list of the required reporting channels and telephone numbers.

1.5.3 Recycling and Waste Minimization Plan The Contractor shall submit a Recycling and Waste Minimization Plan as a part of the Environmental Protection Plan. The plan shall detail the Contractor's actions to comply with the following recycling and waste minimization requirements:

a. The Contractor shall participate in State and local Government sponsored recycling programs to reduce the volume of solid waste materials at the source;

b. Recovery of metal from debris and sale to recycling operation with Contractor retaining any money derived from sale;

c. Collection of aluminum cans at the site for recycling.

1.5.4 Contaminant Prevention Plan As a part of the Environmental Protection Plan, the Contractor shall prepare a contaminant prevention statement identifying potentially hazardous substances to be used on the job site and intended actions to prevent accidental or intentional introduction of such materials into the air, water, or ground. The Contractor shall detail provisions to be taken to meet Federal, State, and local laws and regulations regarding the storage and handling of these materials.

1.5.5 Environmental Monitoring The Contractor shall include in the plan the details of environmental monitoring requirements under the laws and regulations and a description of how this monitoring will be accomplished.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 SPECIAL ENVIRONMENTAL PROTECTION REQUIREMENTS.

3.1.1 Tree Protection. No ropes, cables, or guys shall be fastened to

or attached to any trees for anchorage unless specifically authorized by the Contracting Officer. Where such special use is permitted, the Contractor shall provide effective protection to prevent damage to the trees and other land and vegetative resources. Unless specifically authorized by the Contracting Officer, no construction equipment or materials shall be placed or used within the dripline of trees shown on the drawings to be saved. No excavation or fill shall be permitted within the dripline of trees to be saved except as shown on the drawings.

#### 3.1.2 U.S. Department of Agriculture (USDA) Quarantined Considerations

The Contractor shall thoroughly clean all construction equipment at the prior job site in a manner that ensures all residual soil is removed and that egg deposits from plant pests are not present. The Contractor shall consult with the USDA Plant Protection and Quarantine (USDA- PPQ) jurisdictional office for additional cleaning requirements that may be necessary.

3.1.3 Commercial Borrow. Prior to bringing commercially obtained borrow material onsite, the Contractor shall provide the Contracting Officer with the location of the borrow areas, the names of the owners and operators, and the types and estimated quantities of materials to be obtained from each source.

3.1.4 Disposal of Solid Wastes. Solid waste is rubbish, debris, waste materials, garbage, and other discarded solid materials (excluding clearing debris and hazardous waste as defined in following paragraphs). Solid waste shall be placed in containers and disposed on a regular schedule. All handling and disposal shall be conducted in such a way as to prevent spillage and contamination. The Contractor shall transport all solid waste off site and dispose in compliance with Federal, State, and local requirements. The Contractor shall comply with Federal, State, and local laws and regulations pertaining to the use of the landfill area.

3.1.5 Clearing Debris. Clearing debris is trees, tree stumps, tree trimmings, and shrubs, and leaves, vegetative matter, excavated natural materials (e.g., dirt, sand, and rock), and demolition products (e.g., brick, concrete, glass, and metals).

a. The Contractor shall collect trees, tree stumps, tree trimmings, shrubs, leaves, and other vegetative matter; and shall transport off site for proper disposal in compliance with Federal, State, and local requirements. The Contractor shall segregate the matter where appropriate for proper disposal. Untreated and unpainted scrap lumber may be disposed of with this debris where appropriate.

b. Excavated natural materials shall be transported from the project site for proper disposal in compliance with Federal, State, and local requirements.

c. Demolition products shall be transported from the project site for proper disposal in compliance with Federal, State, and local requirements.

3.1.6 Disposal of Contractor Generated Hazardous Wastes Hazardous wastes are hazardous substances as defined in 40 CFR 261, or as defined by applicable State and local regulations. Hazardous waste generated by construction activities shall be removed from the work area and be disposed in compliance with Federal, State, and local requirements. The Contractor shall segregate hazardous waste from other materials and wastes, and shall protect it from the weather by placing it in a safe covered location; precautionary measures against accidental spillage such as berming or other appropriate measures shall be taken. Hazardous waste shall be removed from the project

site within 60 days. Hazardous waste shall not be dumped onto the ground, into storm sewers or open water courses, or into the sanitary sewer system.

3.1.7 Fuels and Lubricants. Fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spills and evaporation. Lubricants and waste oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in accordance with Federal, State, and local laws and regulations.

### 3.2 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES.

3.2.1 Discovered Historic, Archaeological, and Cultural Resources If during construction activities, items are observed that may have historic or archaeological value (e.g., Native American human remains or associated objects are discovered), such observations shall be reported immediately to the Contracting Officer so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. The Contractor shall cease all activities that may result in impact to or the destruction of these resources. The Contractor shall prevent its employees from trespassing on, removing, or otherwise disturbing such resources.

3.3 PROTECTION OF WATER RESOURCES. The Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface and ground waters.

3.3.1 Wastewater. Wastewater directly derived from concrete construction activities shall not be discharged before being treated to remove pollutants.

3.4 PROTECTION OF FISH AND WILDLIFE RESOURCES. The Contractor shall keep construction activities under surveillance, management and control to minimize interference with, disturbance to, and damage of, fish and wildlife.

3.5 PROTECTION OF AIR RESOURCES. Special management techniques as set out below shall be implemented to control air pollution by the construction activities. These techniques supplement the requirements of Federal, State, and local laws and regulations; and the safety requirements under this Contract. If any of the following techniques conflict with the requirements of Federal, State, or local laws or regulations, or safety requirements under this contract, then those requirements shall be followed in lieu of the following.

3.5.1 Particulates. Airborne particulates, including dust particles, from construction activities and processing and preparation of materials shall be controlled at all times, including weekends, holidays, and hours when work is not in progress. The Contractor shall maintain all excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, disposal sites, borrow areas, and all other work areas free from airborne dust which would cause a hazard or nuisance.

#### 3.5.2 Other Air Pollutants.

3.5.2.1 Hydrocarbons and Carbon Monoxide. Hydrocarbons and carbon monoxide emissions from equipment shall be controlled to Federal and State allowable limits at all times.

3.5.2.2 Odors. Odors shall be controlled at all times for all construction activities, processing and preparation of materials.

3.6 INSPECTION. If the Contracting Officer notifies the Contractor in writing of any observed noncompliance with contract requirements or Federal, State, or local laws, regulations, or permits, the Contractor shall inform the Contracting Officer of proposed corrective action and take such action to correct the noncompliance. If the Contractor fails to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action is taken. No time extensions will be granted or costs or damages allowed to the Contractor for any such suspension.

3.7 MAINTENANCE OF POLLUTION CONTROL FACILITIES. The Contractor shall maintain all constructed pollution control facilities and portable pollution control devices for the duration of the Contract or for the length of time construction activities create the particular pollutant.

3.8 TRAINING OF CONTRACTOR PERSONNEL. Contractor personnel shall be trained in environmental protection and pollution control. The Contractor shall conduct environmental protection/pollution control meetings for all Contractor personnel monthly. The training and meeting agenda shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, installation and care of facilities (vegetative covers, etc.), and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control. Anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants, shall also be discussed. Other items to be discussed shall include recognition and protection of archaeologic sites and artifacts.  
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## SECTION 01300 - SUBMITTAL PROCEDURES

## PART 1 GENERAL

## 1.1 SUBMITTAL CLASSIFICATION. Submittals are classified as follows:

1.1.1 Government Approved (GA). Governmental approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings."

1.1.2 For Information Only (FIO). All submittals not requiring Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above.

1.2 APPROVED SUBMITTALS. The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. Approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the CQC requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.3 DISAPPROVED SUBMITTALS. The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with the Contract Clause "Changes" shall be furnished promptly to the Contracting Officer.

1.4 WITHHOLDING OF PAYMENT. Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

## PART 2 PRODUCTS (Not Applicable)

## PART 3 EXECUTION

3.1 GENERAL. The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) representative and each item shall be stamped, signed, and dated by the CQC representative indicating action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and

made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

3.2 SUBMITTAL REGISTER (ENG FORM 4288). At the end of this section is one set of ENG Form 4288 listing items of equipment and materials for which submittals are required by the specifications; this list may not be all inclusive and additional submittals may be required. The Accident Prevention Program (00800-18), Statement of Required Insurance (00800-24), Environmental Protection Plan (01130-1.3.1), and Quality Control Plan (01440-3.5), shall be submitted as set forth in each applicable specification paragraph, and should not be included as part of the Submittal Register ENG Form 4288. Columns "c" through "p" have been completed by the Government; the Contractor shall complete columns "a" and "r" through "y" and submit the forms to the Contracting Officer for approval within 10 calendar days after Notice to Proceed. The approved submittal register will become the scheduling document and will be used to control submittals throughout the life of the contract. The submittal register and the progress schedules shall be coordinated. The time for submission, procurement, lag/lead and delivery shall be entered through the Resident Management System (RMS) QC module. After entry of that data, the ENG Form 4288 (RMS) shall be produced from the RMS QC module.

3.3 SCHEDULING. Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time (a minimum of 30 calendar days exclusive of mailing time) shall be allowed and shown on the register for review and approval. No delay damages or time extensions will be allowed for time lost in late submittals. The Contractor's Quality Control representative shall review the listing at least every 60 days and take appropriate action to maintain an effective system. Copies of updated or corrected listing shall be submitted to the Contracting Officer at least every 30 days in the quantity specified.

3.4 TRANSMITTAL FORM (ENG FORM 4025). The sample transmittal form (ENG Form 4025) attached to this section shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms will be furnished to the Contractor. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item. The ENG Form 4025 may be prepared by use of the Resident Management System (RMS) QC module.

3.5 SUBMITTAL PROCEDURE. Submittals shall be made as follows:

3.5.1 Procedures. The Contractor shall submit to the Contracting Officer for approval six copies of all shop drawings as called for under the various headings of these specifications.

3.5.2 Deviations. For submittals which include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025 shall be checked. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

3.6 CONTROL OF SUBMITTALS. The Contractor shall carefully control its procurement operations to ensure that each individual submittal is made on or

before the Contractor scheduled submittal date shown on the approved "Submittal Register."

3.7 GOVERNMENT APPROVED SUBMITTALS. Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. Five copies of the submittal will be retained by the Contracting Officer and one copy of the submittal will be returned to the Contractor.

3.8 INFORMATION ONLY SUBMITTALS. Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

3.9 STAMPS. Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to the following:

CONTRACTOR (Firm Name)
_____ Approved
_____ Approved with corrections as noted on submittal data and/or attached sheets(s).
SIGNATURE: _____
TITLE: _____
DATE: _____

3.10 SUBMITTALS REQUIRED WITHIN 15 DAYS AFTER RECEIPT OF NOTICE OF AWARD.

<u>Specification</u> <u>Section/Para No.</u>	<u>Description of Submittal</u>
00800-18	ACCIDENT PREVENTION PROGRAM
a.	An executed LMV Form 358R, Administrative Plan
b.	An executed LMV Form 359R, Activity Hazard Analysis
c.	A copy of Company Policy statement of Accident Prevention
d.	An executed LMV Form 414R, Fuel Oil Transfer
00800-24	STATEMENT OF REQUIRED INSURANCE
01130-1.3.1	ENVIRONMENTAL PROTECTION PLAN
01440-3.5	QUALITY CONTROL PLAN
xxx	

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TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE <small>(Read instructions on the reverse side prior to initiating this form)</small>						DATE	TRANSMITTAL NO.		
<b>SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS</b> <small>(This section will be initiated by the contractor)</small>									
TO:		FROM:		CONTRACT NO.		CHECK ONE: <input type="checkbox"/> THIS IS A NEW TRANSMITTAL <input type="checkbox"/> THIS IS A RESUBMITTAL OF TRANSMITTAL _____			
SPECIFICATION SEC. NO. <small>(Cover only one section with each transmittal)</small>		PROJECT TITLE AND LOCATION		CHECK ONE: THIS TRANSMITTAL IS FOR <input type="checkbox"/> FID <input type="checkbox"/> GOV'T. APPROVAL					
ITEM NO.	DESCRIPTION OF ITEM SUBMITTED <small>(Type size, model number/etc.)</small>	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. <small>(See instruction no. 8f)</small>	NO. OF COPIES	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE	VARIATION <small>(See Instruction No. 6)</small>	FOR CE USE CODE	
				SPEC. PARA. NO.	DRAWING SHEET NO.				
a.	b.	c.	d.	e.	f.	g.	h.	i.	
REMARKS				I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as other wise stated.					
NAME AND SIGNATURE OF CONTRACTOR									
<b>SECTION II - APPROVAL ACTION</b>									
ENCLOSURES RETURNED <small>(List by Item No.)</small>				NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY				DATE	
ENG FORM 4025-R, MAR 95				(IFR 415-1-10)				EDITION OF SEP 93 IS OBSOLETE.	SHEET ____ OF ____ (Prepared: CEMP-CE)

## INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.
2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.
3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288-R for each entry on this form.
4. Submittals requiring expeditious handling will be submitted on a separate form.
5. Separate transmittal form will be used for submittals under separate sections of the specifications.
6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".
7. Form is self-transmittal, letter of transmittal is not required.
8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.
9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

### THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

A --	Approved as submitted.	E --	Disapproved (See attached).
B --	Approved, except as noted on drawings.	F --	Receipt acknowledged.
C --	Approved, except as noted on drawings. Refer to attached sheet resubmission required.	FX --	Receipt acknowledged, does not comply as noted with contract requirements.
D --	Will be returned by separate correspondence.	G --	Other (Specify)

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

(Reverse of ENG Form 4025-R)





SUBMITTAL REGISTER (ER 415-1-10)										CONTRACT NO.																
TITLE AND LOCATION Carlyle Dam West High Water Boat Ramp Carlyle Lake, Kaskaskia River, Clinton County, Illinois										CONTRACTOR				SPECIFICATION SECTION												
A C T I V I T Y  N O	TRANS- MITTAL NO.	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL										CLASSI- FICATION	CONTRACTOR SCHEDULE DATES				CONTRACTOR ACTION			GOVERNMENT ACTION		REMARKS		
				D R A W I N G S	T E M P L A T E S	S C H E D U L E S	S T A T E M E N T S	R E P O R T S	C E R T I F I C A T E S	O & M A T E R I A L S	R E C O R D S	C O N S T R U C T I O N S	I N F O R M A T I O N		O & M A T E R I A L S	S U B M I T	A P P R O V A L	M A T E R I A L N E E D E D	C O D E	D A T E	S U B M I T T O G O V E R N M E N T	C O D E	D A T E			
a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.	l.	m.	n.	o.	p.	q.	r.	s.	t.	u.	v.	w.	x.	y.	z.	aa.
			02730-1.5.1	Water Collection System Details		x										x										
			02740-1.5.1	Pressure Sewer System Details	x											x										
			02840-1.4.1(1)	Guardrail Details	x										x											
			02840-1.4.1(2)	Access Gate Details	x											x										
			02935-1.4.1	Soil Test & Fertilizer Rates					x							x										
			03300-1.4.1	Nonshrink Grout	x											x										
			03300-1.4.2 (1)	Proportions				x								x										
			03300-1.4.2 (2)	Conveying Equipment				x								x										
			03300-1.4.2 (3)	Placing				x								x										
			03300-1.4.2 (4)	Joint Cleanup				x								x										
			03300-1.4.2 (5)	Curing				x								x										
			03300-1.4.2 (6)	Cold-Weather Placing				x								x										
			03300-1.4.2 (7)	Hot-Weather Placing				x								x										
			03300-1.4.3 (1)	Concrete Mixture Proportions					x							x										
			03300-1.4.3 (2)	Prepackaged Nonshrink Grout					x							x										
			03300-1.4.3 (3)	Cylinder Tests					x							x										
			03300-1.4.3 (4)	Slump Tests					x							x										
			03300-1.4.3 (5)	Air Content Testing						x						x										
			03300-1.4.4 (1)	Cement							x					x										
			03300-1.4.4 (2)	Nonshrink Grout							x					x										

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## SECTION 01440 - CONTRACTOR QUALITY CONTROL

## PART 1 - GENERAL

1.1 REFERENCES. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

1.1.1 American Society for Testing and Materials (ASTM).

ASTM D 3740 (1995)	Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
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ASTM E 329 (1995)	Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction
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1.2 PAYMENT. Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lumpsum prices contained in the Bidding Schedule.

## PART 2 - PRODUCTS. (Not Applicable)

## PART 3 - EXECUTION

3.1 GENERAL. The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause entitled "Inspection of Construction." The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all construction operations, both onsite and off-site, and shall be keyed to the proposed construction sequence.

## 3.2 QUALITY CONTROL PLAN.

3.2.1 General. The Contractor shall furnish for acceptance by the Government within 15 days after receipt of Notice of Award, the original and one copy of the Contractor Quality Control Plan proposed for use in implementing the requirements of the Contract Clause entitled "Inspection of Construction". The plan shall identify personnel, procedures, instructions, records, and forms to be used. If the Contractor fails to submit an acceptable Quality Control Plan within the time specified herein, the Contracting Officer may refuse to allow the start of construction, or funds may be withheld from progress payments in accordance with the Contract Clause entitled "Payments under Fixed-Price Construction Contracts".

3.2.2 Content of the CQC Plan. The CQC plan shall include, as a minimum, the following to cover all construction operations, both onsite and off-site, including work by subcontractors, fabricators, suppliers, and purchasing agents:

a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC system manager who shall report to

the project manager or someone higher in the Contractor's organization. Project Manager in this context shall mean the individual with responsibility for the overall management of the project including quality and production.

b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.

c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm, which describes the responsibilities and delegates the authorities of the CQC System Manager.

d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, off-site fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with SECTION 01300 - SUBMITTAL PROCEDURES.

e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities will be approved by the Contracting Officer.)

f. Procedures for tracking preparatory, initial, and followup control phases and control, verification, and acceptance tests including documentation.

g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.

h. Reporting procedures, including proposed reporting formats.

i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks and has separate control requirements. It could be identified by different trades or disciplines, or it could be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable feature under a particular section. This list shall be agreed upon during the coordination meeting.

3.2.3 Acceptance of Plan. Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in the CQC plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.2.4 Notification of Changes. After acceptance of the QC plan, the Contractor shall notify the Contracting Officer in writing a minimum of seven calendar days prior to any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.3 COORDINATION MEETING. After the Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the Quality Control Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations,



control activities, testing, administration of the system for both onsite and off-site work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION. The Contractor shall identify an individual within its organization at the worksite who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. This CQC System Manager shall be on the site at all times during construction and shall be employed by the Contractor. This Contractor Quality Control System Manager shall be Corps' certified and shall be approved by the Contracting Officer. To become "certified" the manager must have completed the course entitled "Construction Quality Management for Contractors". This course is offered quarterly at the St. Louis Corps of Engineers District Office. An alternate for the CQC System Manager shall be identified in the plan to serve in the event of the System Manager's absence. Period of absence may not exceed one (1) week at any one time, and not more than ten (10) workdays during a calendar year. The requirements for the alternate will be the same as for the designated CQC Manager.

3.4.1 CQC Organizational Staffing. The Contractor shall provide a CQC staff which shall be at the worksite at all times during progress, with complete authority to take any action necessary to ensure compliance with the contract.

3.4.1.1 CQC Staff. Following are the minimum requirements for the CQC staff. These minimum requirements will not necessarily assure an adequate staff to meet the CQC requirements at all times during construction. The actual strength of the CQC staff may vary during any specific work period to cover the needs of the work period. When necessary for a proper CQC organization, the Contractor shall add additional staff at no cost to the Government. This listing of minimum staff in no way relieves the Contractor of meeting the basic requirements of quality construction in accordance with contract requirements. All CQC staff members shall be subject to acceptance by the Contracting Officer.

3.4.2 Organizational Changes. The Contractor shall obtain Contracting Officer's acceptance before replacing any member of the CQC staff. Requests shall include the names, qualifications, duties, and responsibilities of each proposed replacement.

3.5 SUBMITTALS. Submittals shall be made as specified in SECTION 01300 - SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.

3.6 CONTROL. The controls shall include at least three phases of control to be conducted by the CQC System Manager for all definable features of work, as follows:

3.6.1 Preparatory Phase. This phase shall be performed prior to beginning work on each definable feature of work and shall include:

- a. A review of each paragraph of applicable specifications.

- b. A review of the contract drawings.
- c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.
- d. A check to assure that provisions have been made to provide required control inspection and testing.
- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.
- f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- g. A review of the appropriate activity hazard analysis to assure safety requirements are met.
- h. Discussion of procedures for constructing the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that phase of work.
- i. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.
- j. The Government shall be notified at least 24 hours in advance of beginning any of the required action of the preparatory phase. This phase shall include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC System Manager and attached to the daily CQC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.6.2 Initial Phase. This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

- a. A check of preliminary work to ensure that it is in compliance with contract requirements. Review minutes of the preparatory meeting.
- b. Verification of full contract compliance. Verify required control inspection and testing.
- c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with sample panels is appropriate.
- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- f. The Government shall be notified at least (24) hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC System Manager and attached to the daily CQC report. Exact location of initial phase shall be indicated for future reference and

comparison with follow-up phases.

g. The initial phase should be repeated for each new crew to work on-site, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase. Daily checks shall be performed to assure continuing compliance with contract requirements, including control testing, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final followup checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon or conceal non-conforming work.

3.6.4 Additional Preparatory and Initial Phases As determined by the Government, additional preparatory and initial phases may be conducted on the same definable features of work if the quality of ongoing work is unacceptable, if there are changes in the applicable CQC staff, onsite production supervision or work crew, if work on a definable feature is resumed after a substantial period of inactivity, or if other problems develop.

### 3.7 TESTS.

3.7.1 Testing Procedure. The Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements. Testing includes operation and/or acceptance tests when specified. The Contractor shall procure the services of a Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site. The Contractor shall perform the following activities and record and provide the following data:

a. Verify that testing procedures comply with contract requirements.

b. Verify that facilities and testing equipment are available and comply with testing standards.

c. Check test instrument calibration data against certified standards.

d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.

e. Results of all tests taken, both passing and failing tests, shall be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test shall be given. If approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an off-site or commercial test facility shall be provided directly to the Contracting Officer. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

### 3.7.2 Testing Laboratories.

3.7.2.1 Capability Check. The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for

testing soils, concrete, asphalt, and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329.

3.7.2.2 Capability Recheck. If the selected laboratory fails the capability check, the Contractor will be assessed any charges incurred to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the contract amount due the Contractor.

3.7.3 On-Site Laboratory. The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

3.7.4 Furnishing or Transportation of Samples for Testing Costs incidental to the transportation of samples or materials shall be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered to the Corps of Engineers Division Laboratory, f.o.b., at the following address:

For delivery by mail:

Waterways Experiment Station  
P.O. Box 631  
Vicksburg, MS 39181-0631

For other deliveries:

Waterways Experiment Station  
3909 Halls Ferry Road  
Vicksburg, MS 39180-6199

Coordination for each specific test, exact delivery location, and dates shall be made through the Area Office.

3.8 COMPLETION INSPECTION. At the completion of all work or any increment thereof established by a completion time stated in the Special Clause entitled "Commencement, Prosecution, and Completion of Work," or stated elsewhere in the specifications, the CQC System Manager shall conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved drawings and specifications. Such a list of deficiencies shall be included in the CQC documentation, as required by paragraph DOCUMENTATION below, and shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected and so notify the Government. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time stated for completion of the entire work or any particular increment thereof if the project is divided into increments by separate completion dates.

3.9 DOCUMENTATION. The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on the form as produced through the Resident Management System (RMS) QC module that includes, as a minimum, the following information:

- a. Contractor/subcontractor and their area of responsibility.

b. Operating plant/equipment with hours worked, idle, or down for repair.

c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.

d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase should be identified (Preparatory, Initial, Follow-up). List deficiencies noted along with corrective action.

e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.

f. Submittals reviewed, with contract reference, by whom, and action taken.

g. Off-site surveillance activities, including actions taken.

h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.

i. Instructions given/received and conflicts in plans and/or specifications.

j. Contractor's verification statement.

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Government daily within 24 hours after the date(s) covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every seven days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.10 NOTIFICATION OF NONCOMPLIANCE. The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the worksite, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

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## SECTION 01500 - TEMPORARY CONSTRUCTION FACILITIES

### PART 1 GENERAL

1.1 GENERAL REQUIREMENTS. As soon as practicable, but not later than 15 days after the date established for commencement of work, the Contractor shall provide the temporary facilities specified herein. The temporary facilities shall be maintained by the Contractor during the life of the contract and upon completion and acceptance of the work shall be removed from the site of the work.

1.1.1 No Separate Payment. Payment for materials and equipment furnished under this section will not be paid for separately, and all costs in connection therewith shall be included in other items for which payment is provided.

### PART 2 PRODUCTS

2.1 TEMPORARY PROJECT AND SAFETY SIGNS. The Contractor shall furnish and erect one temporary project sign and one safety sign at the project site at the location designated by the Contracting Officer. The signs shall conform to the requirements of U.S. Army Corps of Engineers Sign Standard Manual EP-310.1-6a, Section 16 entitled, "Construction Project Signs", Pages 16.1 through 16.4, copies of which are enclosed at the end of this section. Information will be furnished by the Contracting Officer as to the location and wording of the signs.

2.2 TEMPORARY PROJECT SAFETY FENCING. The Contractor shall furnish and erect temporary project safety fencing at the work site. The safety fencing shall be a high visibility orange colored, high density polyethylene grid or approved equal, a minimum of 42 inches high, supported and tightly secured to steel posts located on maximum 10 foot centers, constructed at the approved location as shown on the drawings.

### PART 3 EXECUTION

3.1 HAUL ROADS. Whenever practical, one-way haul roads shall be used on this contract. Haul roads built and maintained for this work shall comply with the following:

a. One-way haul roads for off-the-road equipment; e.g., belly dumps, scrapers, and off-the-road trucks, shall have a minimum usable width of 25 feet. One-way haul roads for over-the-road haulage equipment only (e.g., dump trucks, etc.) may be reduced to a usable width of 15 feet. When the Contracting Officer determines that it is impractical to obtain the required width for one-way haul roads (e.g., a road on top of a levee), a usable width not less than 10 feet may be approved by the Contracting Officer, provided a positive means of traffic control is implemented. Such positive means shall be signs, signals, and/or signalman and an effective means of speed control.

b. Two-way haul roads for off-the-road haulage equipment shall have a usable width of 60 feet. Two-way haul roads for over-the-road haulage equipment only may be reduced to a usable width of 30 feet.

c. Haul roads shall be graded and otherwise maintained to keep the surface free from potholes, ruts, and similar conditions that could result in unsafe operation.

d. Grades and curves shall allow a minimum sight distance of 200 feet for one-way roads and 300 feet for two-way roads. Sight distance is defined as the centerline distance an equipment operator (4.5 feet above the road surface) can see an object 4.5 feet above the road surface. When conditions make it impractical to obtain the required sight distance (e.g., ramps over levees), a positive means of traffic control shall be implemented.

e. Dust abatement shall permit observation of objects on the roadway at a minimum distance of 300 feet.

f. Haul roads shall have the edges of the usable portion marked with posts at intervals of 50 feet on curves and 200 feet maximum elsewhere. Such markers shall extend 6 feet above the road surface and, for nighttime haulage, be provided with reflectors in both directions.

3.2 CLEANUP. Construction debris, waste materials, packaging material and the like shall be removed from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways shall be cleaned away.

3.3 RESTORATION OF STORAGE AREA. Upon completion of the project, areas used by the Contractor for the storage of equipment or material, or other use, shall be restored to the original or better condition.

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The use of signs to identify Corps managed or supervised design, construction, and rehabilitation projects—both for military and civil works is an important part of efforts to keep the public informed of Corps work. For this purpose, a construction project sign package has been adopted. This package consists of two signs; one for project identification and the other to show on-the-job safety performance of the contractor.

These two signs are to be displayed side by side and mounted for reading by passing viewers. Exact placement location will be designated by the contracting officer.

The panel sizes and graphic formats have been standardized for visual consistency throughout all Corps operations.

Panels are fabricated using HDO plywood with dimensional lumber uprights and bracing. The sign faces are non-reflective vinyl.

All legend sare to be die-cut or computer-cut in the sizes and typefaces specified and applied to the white panel background following the graphic formats shown on pages 16.2-3. The Communications Red panel on the left side of the construction project sign with Corps signature (reverse version) is screen printed onto the white background.

A display of these two signs is shown on the following two pages. Mounting and fabrication details are provided on page 16.4.

Special applications or situations not covered in these guidelines should be referred to the District/Division sign coordinator.

Below are two samples of the construction project identification sign showing how this panel is adaptable for use to identify either military (top), or civil works projects (bottom). The graphic format for this 4' x 6' sign panel follows the legend guidelines and layout as specified below. The large

4' x 4' section of the panel on the right is to be white with black legend. The 2' x 4' section of the sign on the left with the full Corps signature (reverse version) is to be screen printed Communications Red on the white background.

This sign is to be placed with the Safety Performance Sign shown on the following

page. Mounting and fabrication details are provided on page 16.4.

Special applications or situations not covered in these guidelines should be referred to the District/Division sign coordinator.

Legend Group 1: One- to two-line description of Corps relationship to project.

Color: White

Typeface: 1.25" Helvetica Regular  
Maximum line length: 19"

Legend Group 2: Division or District Name (optional). Placed below 10.5" Reverse Signature (6" Castle).

Color: White

Typeface: 1.25" Helvetica Regular

Legend Group 3: One- to three-line project title legend describes the work being done under this contract.

Color: Black

Typeface: 3" Helvetica Bold  
Maximum line length: 42"

Legend Group 4: One- to two-line identification of project or facility (civil works) or name of sponsoring department (military).

Color: Black

Typeface: 1.5" Helvetica Regular  
Maximum line length: 42"

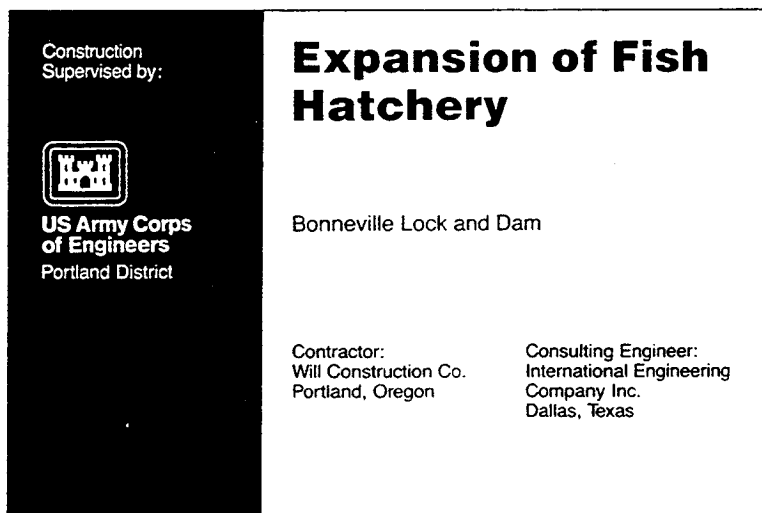
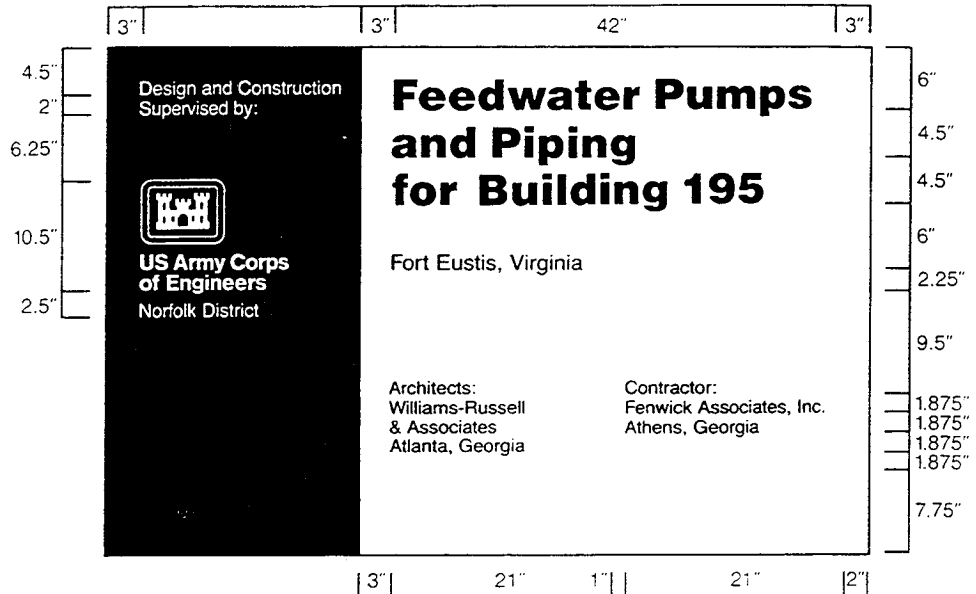
Cross-align the first line of Legend Group 4 with the first line of the Corps Signature (US Army Corps) as shown.

Legend Groups 5a-b: One- to five-line identification of prime contractors including: type (architect, general contractor, etc.), corporate or firm name, city, state. Use of Legend Group 5 is optional.

Color: Black

Typeface: 1.25" Helvetica Regular  
Maximum line length: 21"

All typography is flush left and rag right, upper and lower case with initial capitals only as shown. Letter- and word-spacing to follow Corps standards as specified in Appendix D.



Sign Type	Legend Size	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
CID-01	various	4" x 6"	4" x 4"	HDO-3	48"	WH-RD/BK

Each contractor's safety record is to be posted on Corps managed or supervised construction projects and mounted with the construction project identification sign specified on page 16.2.

The graphic format, color, size and type-faces used on the sign are to be reproduced exactly as specified below. The title

with First Aid logo in the top section of the sign, and the performance record captions are standard for all signs of this type. Legend Groups 2 and 3 below identify the project and the contractor and are to be placed on the sign as shown.

Safety record numbers are mounted on individual metal plates and are screw-mounted to the background to allow for

daily revisions to posted safety performance record.

Special applications or situations not covered in these guidelines should be referred to the District/Division sign coordinator.

Legend Group 1: Standard two-line title "Safety is a Job Requirement", with (8" od.) Safety Green First Aid logo. Color: To match PMS 347 Typeface: 3" Helvetica Bold Color: Black

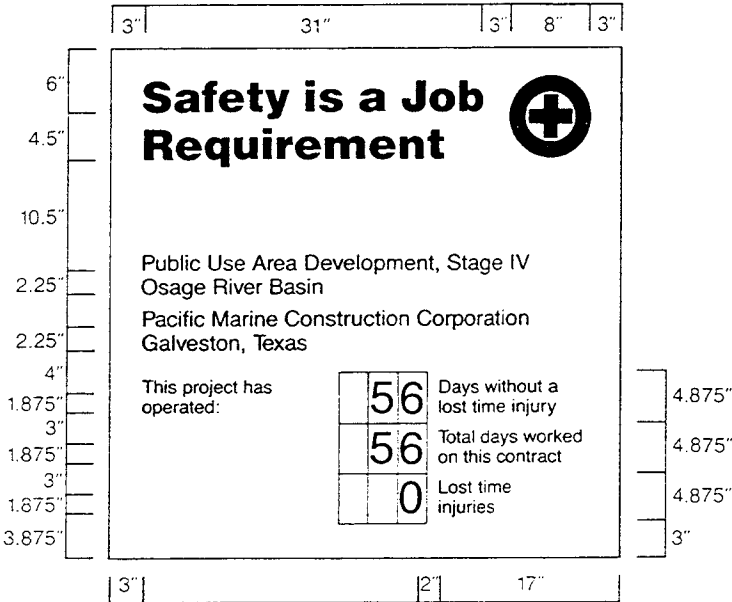
Legend Group 2: One- to two-line project title legend describes the work being done under this contract and name of host project. Color: Black Typeface: 1.5" Helvetica Regular Maximum line length: 42"

Legend Group 3: One- to two-line identification: name of prime contractor and city, state address. Color: Black Typeface: 1.5" Helvetica Regular Maximum line length: 42"

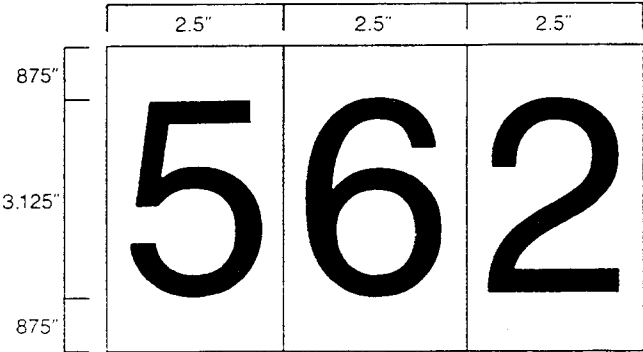
Legend Group 4: Standard safety record captions as shown. Color: Black Typeface: 1.25" Helvetica Regular

Replaceable numbers are to be mounted on white .060 aluminum plates and screw-mounted to background. Color: Black Typeface: 3" Helvetica Regular Plate size: 2.5" x .5"

All typography is flush left and rag right, upper and lower case with initial capitals only as shown. Letter- and word-spacing to follow Corps standards as specified in Appendix D.



Sign Type	Legend Size	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
CID-02	various	4" x 4"	4" x 4"	HDO-3	48"	WH/BK-GR



All Construction Project Identification signs and Safety Performance signs are to be fabricated and installed as described below. The signs are to be erected at a location designated by the contracting officer and shall conform to the size, format, and typographic standards shown on

pages 16.2-3. Detailed specifications for HDO plywood panel preparation are provided in Appendix B.

Shown below the mounting diagram is a panel layout grid with spaces provided for project information. Photocopy this page and use as a worksheet when preparing sign legend orders.

For additional information on the proper method to prepare sign panel graphics, contact the District sign coordinator.

The sign panels are to be fabricated from .75" High Density Overlay Plywood. Panel preparation to follow HDO specifications provided in Appendix B.

Sign graphics to be prepared on a white non-reflective vinyl film with positionable adhesive backing.

All graphics except for the Communications Red background with Corps signature on the project sign are to be die-cut or computer-cut non-reflective vinyl, pre-spaced legends prepared in the sizes and typefaces specified and applied to the background panel following the graphic formats shown on pages 16.2-3.

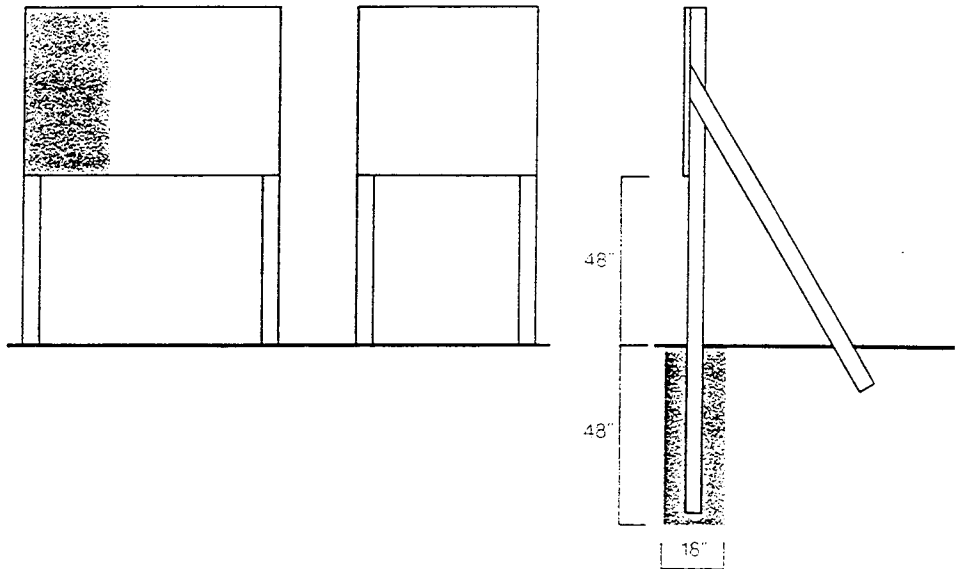
The 2' x 4' Communications Red panel (to match PMS-032) with full Corps signature (reverse version) is to be screen printed on the white background. Identification of the District or Division may be applied under the signature with white cut vinyl letters prepared to Corps standards. Large scale reproduction artwork for the signature is provided on page 4.8 (photographically enlarge from 6.875" to 10.5").

Drill and insert six (6) .375" T-nuts from the front face of the HDO sign panel. Position holes as shown. Flange of T-nut to be flush with sign face.

Apply graphic panel to prepared HDO plywood panel following manufacturers' instructions.

Sign uprights to be structural grade 4" x 4" treated Douglas Fir or Southern Yellow Pine, No.1 or better. Post to be 12' long. Drill six (6) .375" mounting holes in uprights to align with T-nuts in sign panel. Countersink (.5") back of hole to accept socket head cap screw (4" x .375").

Assemble sign panel and uprights. Imbed assembled sign panel and uprights in 4' hole. Local soil conditions and/or wind loading may require bolting additional 2" x 4" struts on inside face of uprights to reinforce installation as shown.



#### Construction Project Sign Legend Group 1: Corps Relationship

1. \_\_\_\_\_
2. \_\_\_\_\_

#### Legend Group 2: Division/District Name

1. \_\_\_\_\_
2. \_\_\_\_\_

#### Legend Group 3: Project Title

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

#### Legend Group 4: Facility Name

1. \_\_\_\_\_
2. \_\_\_\_\_

#### Legend Group 5a: Contractor/A&E

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

#### Legend Group 5b: Contractor/A&E

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

#### Safety Performance Sign Legend Group 1: Project Title

1. \_\_\_\_\_
2. \_\_\_\_\_

#### Legend Group 2: Contractor/A&E

1. \_\_\_\_\_
2. \_\_\_\_\_

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SECTION 02110  
CLEARING, GRUBBING, AND STRIPPING

PART 1 - GENERAL

1.1 SCOPE. The work covered by this section consists of furnishing all plant, labor, equipment, and materials, and performing all operations necessary for the clearing, grubbing, and stripping of the areas specified herein or indicated on the drawings, and for the removal and disposal of all cleared, grubbed, and stripped materials.

1.2 QUALITY CONTROL.

1.2.1 General. The Contractor shall establish and maintain quality control for clearing, grubbing, and stripping operations to assure compliance with contract requirements, and maintain records of quality control for all construction operations including but not limited to the following:

(1) Clearing, Grubbing, and Stripping. Limits, depth of stripping, percentage of area complete; type of material.

(2) Disposition of Cleared, Grubbed, and Stripped Materials. Method and location of disposition; damage to timber or improvements which are not to be cleared.

1.2.2 Reporting. A copy of these records of inspections and tests, as well as the records of corrective action taken, shall be furnished to the Government daily.

1.3 SUBMITTALS. Government approval is required for submittals with a "GA" designation; submittals having and "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01300 - SUBMITTAL PROCEDURES.

1.3.1 Statement; FIO. If the Contractor proposes to dispose of material on private property, the Contractor shall submit written evidence to the Contracting Officer that permission has been obtained from the property owner for disposal of material on the owner's property. The written evidence shall consist of an authenticated copy of the conveyance under which the Contractor acquired the property rights and access thereto, prepared and executed in accordance with the laws of the State in which the material is to be disposed.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 CLEARING.

3.1.1 General. Clearing, unless otherwise specified, shall consist of the complete removal above the ground surface of all trees, stumps, down timber, snags, and brush from within the construction limits shown on the drawings, unless otherwise noted, including the complete cleanup of the area by the removal and disposal of all debris resulting from clearing operations, to the extent hereinafter specified.

3.1.2 Merchantable Timber. Merchantable timber and other cleared material may be disposed of as the Contractor sees fit, as long as such merchantable timber and other cleared material are removed from the area and are satisfactorily disposed of in accordance with the provisions of paragraph 02110-3.4.

3.1.3 Timber Clearing. Trees within the clearing area shall be felled in such a manner as to avoid damage to trees to be left standing and trees outside the clearing area, existing buildings, and facilities, and with due regard for the safety of employees and others.

### 3.2 GRUBBING.

3.2.1 General. Grubbing shall consist of the removal of all stumps, roots, and other projections larger than 1 ½ inch in diameter to a depth of 3 ½ feet below the natural ground surface.

3.2.2 Areas to be Grubbed. Grubbing shall be performed within the limits of all areas designated for clearing as stated in paragraph 3.1.1 above. All holes caused by grubbing operations, except areas of excavation, shall be backfilled with fill material as specified in SECTION 02221, placed in 8 inch layers to an elevation of the adjacent ground surface, and each layer compacted to a density equivalent to that of the surrounding materials.

3.3 STRIPPING. Stripping shall consist of the removal of materials down to bare earth and without removing more earth than is necessary and no more than 6 inches.

### 3.4 DISPOSAL OF MATERIAL.

3.4.1 General. All cleared material shall be removed from the site in accordance with paragraph 3.4.3. All timber from which saw logs, posts, ties or cordwood can be produced shall become the property of the Contractor, and in the interest of conservation it is required that the Contractor make a reasonable effort to salvage such material.

3.4.2 Stripped Material. All stripped material, shall be stockpiled and used for the last 4 inches of fill in the trench for the 8 inch gravity sewer.

3.4.3 Removal from Site of Work. The debris shall be hauled to the nearest state approved landfill or disposal site. Such disposal shall comply with all applicable Federal, State, and local laws. The Contractor shall, at its option, either retain for its own use or dispose of by sale or otherwise, any such materials of value. The Government is not responsible for the protection and safekeeping of any materials retained by the Contractor. Such materials shall be removed from the site of the work before the date of completion of the work. If material resulting from clearing operations is placed on private property, the Contractor shall obtain without cost to the Government, additional right-of-way for such purposes. Such material shall be so placed as not to interfere with roads, drainage or other improvements and in such a manner as to eliminate the possibility of its entering into channels, ditches, or streams. If temporary rights are obtained by the Contractor, then the period of time shall coincide with Special Clause 1, plus a reasonable time for any extension granted for completion of the work.

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02221.12

SECTION 02221  
EXCAVATION, TRENCHING, AND BACKFILLING FOR WASTEWATER COLLECTION SYSTEM

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SECTION 02221  
EXCAVATION, TRENCHING, AND BACKFILLING FOR WASTEWATER COLLECTION SYSTEM

PART 1 GENERAL

1.1 SCOPE. The work covered by this section of the specifications consists of furnishing all materials, labor, plant and equipment, and performing all operations for the excavation and backfilling of material for constructing the wastewater collection system as specified herein and shown on the drawings.

1.2 REFERENCES.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 422 (1963; R 1990)	Particle-Size Analysis of Soils
ASTM D 698 (1961; R 1997)	Laboratory Compaction Characteristics of Soil Using Standard Effort
ASTM D 1556 (1990)	Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D 2167 (1994)	Density of Soil in Place by the Drive Cylinder Method
ASTM D 2487 (1993)	Classification of Soils for Engineering Purposes
ASTM D 4253 (1993)	Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
ASTM D 4254 (1991)	Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density

1.3 SUBMITTALS. Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01300 SUBMITTAL PROCEDURES:

1.3.1 Reports. Field Density Tests; FIO. Copies of all laboratory and field test reports within 24 hours of the completion of the test.

1.3.2 Certificates. Soil Testing Lab; GA. Submit the name and address of the certified soil testing lab prior to commencing any earthwork.

1.3.3 Plan. Excavation Plan; FIO. An excavation plan identifying method, equipment, and shoring plans for excavation of each of the different sewer lines shall be submitted prior to commencing any earthwork.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Satisfactory Backfill Materials

2.1.1.1 Select Granular Material. Select granular material shall consist of well-graded sand, gravel, crushed gravel, crushed stone or crushed slag composed of hard, tough and durable particles, and shall contain not more than 10 percent by weight of material passing a 0.075 mm (No. 200) mesh sieve

and no less than 95 percent by weight passing the 25 mm (1 inch) sieve. The maximum allowable aggregate size shall be two inches or the maximum size recommended by the pipe manufacturer, whichever is smaller.

2.1.1.2 Sand. Material defined as sand shall consist of any material classified by ASTM D 2487 as SP, SW, SM, SP-SM, or SW-SM.

2.1.1.3 Earth Fill. Material defined as earth fill shall consist of any material classified by ASTM D 2487 as CL, CH, ML, or MH.

2.1.2 Unsatisfactory Materials. Unsatisfactory materials shall be materials that do not comply with the requirements for satisfactory materials. Unsatisfactory materials include but are not limited to those materials containing roots and other organic matter, trash, debris, frozen materials and stones larger than two inches, and materials classified in ASTM D 2487 as PT, OH, and OL. Unsatisfactory materials also include manmade fills, refuse, or backfills from previous construction.

2.1.3 Unstable Material. Unstable material shall consist of materials too wet to properly support the utility pipe, conduit, or appurtenant structure.

2.1.4 Initial Backfill Material. Initial backfill shall consist of select granular material or satisfactory materials free from rocks two inches or larger in any dimension or free from rocks of such size as recommended by the pipe manufacturer, whichever is smaller.

### PART 3 EXECUTION

3.1 EXCAVATION. Excavation shall be performed to the lines and grades indicated on the drawings. During excavation, material satisfactory for backfilling shall be stockpiled in an orderly manner at a distance from the banks of the trench equal to 1/2 the depth of the excavation, but in no instance closer than 2 feet. Excavated material not required or not satisfactory for backfill shall be removed from the site. Grading shall be done as may be necessary to prevent surface water from flowing into the excavation, and any water accumulating therein shall be removed to maintain the stability of the bottom and sides of the excavation. Unauthorized overexcavation shall be backfilled in accordance with paragraph BACKFILLING AND COMPACTION at no additional cost to the Government.

3.1.1 Trench Excavation. The trench shall be excavated to the lines and limits as shown on the drawings. Trench walls below the top of the pipe shall be sloped, or made vertical, and of such width as recommended in the manufacturer's installation manual. Where no manufacturer's installation manual is available, trench walls shall be made vertical. Trench walls more than four feet high shall be shored, cut back to a stable slope, or provided with equivalent means of protection for employees who may be exposed to moving ground or cave in. Vertical trench walls more than four feet high shall be shored. Trench walls which are cut back shall be excavated to at least the angle of repose of the soil. Special attention shall be given to slopes that may be adversely affected by weather or moisture content. The trench excavation of the gravity sewer line shall be shored.

3.1.1.1 Bottom Preparation. The bottoms of trenches shall be accurately graded to provide uniform bearing and support for the bottom quadrant of each section of the pipe. Bell holes shall be excavated to the necessary size at each joint or coupling to eliminate point bearing. Stones of three inches or greater in any dimension, or as recommended by the pipe manufacturer, whichever is smaller, shall be removed to avoid point bearing.

3.1.1.2 Removal of Unstable Material. Where unstable material is

encountered in the bottom of the trench, such material shall be removed to the depth directed and replaced to the proper grade with select granular material as provided in paragraph BACKFILLING AND COMPACTION. When removal of unstable material is required due to the fault or neglect of the Contractor in his performance of the work, the resulting material shall be excavated and replaced by the Contractor without additional cost to the Government.

3.1.1.3 Excavation for Appurtenances. Excavation for manholes, catch-basins, inlets, or similar structures shall be sufficient to leave at least 12 inches clear between the outer structure surfaces and the face of the excavation or support members. Loose disintegrated rock and thin strata shall be removed. Removal of unstable material shall be as specified above. When concrete or masonry is to be placed in an excavated area, special care shall be taken not to disturb the bottom of the excavation.

3.1.1.4 Stockpiles. Stockpiles of satisfactory material shall be placed and graded as specified. Stockpiles shall be kept in a neat and well drained condition, giving due consideration to drainage at all times. The ground surface at stockpile locations shall be cleared, grubbed, and sealed by rubber-tired equipment, excavated satisfactory and unsatisfactory materials shall be separately stockpiled. Stockpiles of satisfactory materials shall be protected from contamination which may destroy the quality and fitness of the stockpiled material. If the Contractor fails to protect the stockpiles, and any material becomes unsatisfactory, such material shall be removed and replaced with satisfactory material from approved sources at no additional cost to the Government.

3.2 BACKFILLING AND COMPACTION. Backfill material shall consist of satisfactory material, select granular material, sand, or earth backfill material as required. Backfill shall be placed in layers not exceeding 6 inches loose thickness for compaction by hand operated machine compactors, and 8 inches loose thickness for other than hand operated machines, unless otherwise specified. Each layer shall be compacted to at least 75 percent relative density for cohesionless soils and 75 percent maximum density for cohesive soils, unless otherwise specified.

3.2.1 Trench Backfill. Trenches shall be backfilled to the grade shown. The trench shall be backfilled to at least the lower half of the pipe prior to performing the required pressure tests. The joints and couplings shall be left uncovered during the pressure test.

3.2.1.1 Replacement of Unyielding Material. Unyielding material removed from the bottom of the trench shall be replaced with select granular material or initial backfill material.

3.2.1.2 Replacement of Unstable Material. Unstable material removed from the bottom of the trench or excavation shall be replaced with select granular material placed in layers not exceeding 6 inches loose thickness.

3.2.1.3 Bedding and Initial Backfill. Initial backfill material shall be placed and compacted with approved method to a height of at least two feet above the utility pipe or conduit. The backfill shall be brought up evenly on both sides of the pipe for the full length of the pipe. Care shall be taken to ensure thorough compaction of the fill under the haunches of the pipe.

3.2.1.4 Final Backfill. The remainder of the trench, except for special materials for roadways, shall be filled with satisfactory material. Backfill material shall be placed and compacted as follows:

a. Roadways: Backfill shall be placed up to the elevation shown on the drawings. Water flooding or jetting methods of compaction will not be permitted.

b. Sidewalks, Turfed or Seeded Areas and Miscellaneous Areas: Backfill shall be deposited in layers of a maximum of 12 inch loose thickness, and compacted to 85 percent maximum density for cohesive soils and 75 percent relative density for cohesionless soils. Compaction by water flooding or jetting will not be permitted. This requirement shall also apply to all other areas not specifically designated above.

c. Replacement of Topsoil. The final eight inches of the trench where not under the road or parking lot, shall be constructed of stockpiled topsoil and compacted with four passes of a crawlertype tractor. The restored surfaces shall be dressed smooth to match the existing, adjacent, undisturbed section. The establishment of turf operation shall not commence until the Contracting Officer approves the final restored section and grades.

3.2.2 Backfill for Appurtenances. After the manhole, catchbasin, inlet, or similar structure has been constructed backfill shall be placed in such a manner that the structure will not be damaged by the shock of falling earth. The backfill material shall be deposited and compacted as specified for final backfill, and shall be brought up evenly on all sides of the structure to prevent eccentric loading and excessive stress.

3.3 TESTING. Testing shall be the responsibility of the Contractor and shall be performed at no additional cost to the Government.

3.3.1 Testing Facilities. Tests shall be performed by an approved commercial testing laboratory or may be tested by facilities furnished by the Contractor. No work requiring testing will be permitted until the facilities have been inspected and approved by the Contracting Officer. The first inspection shall be at the expense of the Government. Cost incurred for any subsequent inspection required because of failure of the first inspection will be charged to the Contractor.

3.3.2 Testing of Backfill Materials. Characteristics of backfill materials shall be determined in accordance with particle size analysis of soils ASTM D 422 and moisture-density relations of soils ASTM D 1556. A minimum of one particle size analysis and one moisturedensity relation test shall be performed on each different type of material used for bedding and backfill.

3.3.3 Field Density Tests. Tests shall be performed in sufficient numbers to ensure that the specified density is being obtained. A minimum of one field density test per lift of backfill of installation shall be performed. One moisture density relationship shall be determined for every 1500 cubic yards of material used. Field inplace density shall be determined in accordance with ASTM D 1556 or ASTM D 2937. Copies of field and laboratory density tests shall be furnished to the Contracting Officer. Trenches improperly compacted shall be reopened to the depth directed, then refilled and compacted to the density specified at no additional cost to the Government.

3.3.4 Displacement of Sewers. After other required tests have been performed and the trench backfill compacted to the finished grade surface, the pipe shall be inspected to determine whether significant displacement has occurred. This inspection shall be conducted in the presence of the Contracting Officer. The pipe shall be inspected by shining a light or laser between manholes or manhole locations, or by the use of television cameras passed through the pipe. If, in the judgement of the Contracting Officer, the interior of the pipe shows poor alignment or any other defects that would cause improper functioning of the system, the defects shall be remedied as directed at no additional cost to the Government.



3.4 GRADE TOLERANCES. The location, grades, and dimensions shall conform to the applicable cross sections on the drawings unless otherwise specified. A tolerance of two-tenths of one foot above the prescribed grade and cross section shown will be permitted in the final dressing. The above tolerance will be permitted provided that there are no abrupt humps or depressions in surfaces.

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## SECTION 02222 - EARTHWORK

## PART 1 - GENERAL

1.1 SCOPE. The work covered by this section consists of furnishing all plant, labor, equipment, and performing all operations in connection with foundation preparation and construction of road fill and boat ramp as shown on the drawings and as hereinafter specified.

## 1.2 QUALITY CONTROL.

1.2.1 General. The Contractor shall establish and maintain quality control for construction operations to assure compliance with contract requirements, and maintain records of its quality control for all construction operations including but not limited to the following:

(1) Equipment. Type, size, and suitability for construction of the prescribed work.

(2) Foundation Preparation. Breaking surface in advance of embankment construction, and during fill placement when necessary, drainage of foundation and partially completed fill.

(3) Materials. Suitability of materials for use in embankment and backfills.

(4) Construction. Layout, maintaining existing drainage, thickness of layers, spreading and compacting.

(5) Grade and Cross Section. Side slopes and grades.

(6) Grade Tolerances. Check fills to determine if placement conforms to prescribed grade and cross section.

(7) Materials Testing and Inspection. The Contractor shall be responsible for ensuring that all required testing, and any additional testing required by the Contracting Officer, is performed. All testing shall be performed by a commercial soil-testing laboratory that has been approved by the Corps of Engineers.

1.2.2 Reporting. A copy of these records of inspections and tests, as well as the records of corrective action taken, shall be furnished the Government daily.

1.3 SUBMITTALS. Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted to the Contracting Officer in accordance with SECTION 01300 - SUBMITTAL PROCEDURES.

1.3.1 Reports. Soil Test Results; FIO. Submit soil classification and moisture density test results as specified.

1.3.2 Certificates. Soil Testing Lab; GA. Submit the name and address of the approved soil testing lab prior to commencing any earthwork.

1.4 REFERENCES. The following publications, referred to hereafter by basic designation only, form a part of this specification to the extent indicated by the reference thereto:

1.4.1 American Society for Testing and Materials (ASTM).

ASTM D 698	(1991; R 1997) Laboratory Compaction Characteristics of Soil Using Standard Effort
ASTM D 1556	(1990; R 1996) Density and Unit Weight of Soil in Place By The Sand-Cone Method
ASTM D 2216	(1992) Laboratory Determination of Water (Moisture) Content of Soil and Rock
ASTM D 2487	(1993) Classification of Soils for Engineering Purposes
ASTM D 2937	(1994) Density of Soil in Place by the Drive-Cylinder Method
ASTM D 4318	(1995, Rev A) Liquid Limit, Plastic Limit and Plasticity Index of Soils

## PART 2 - PRODUCTS

### 2.1 EQUIPMENT.

2.1.1 Crawler-Type Tractors. Crawler-type tractors used for spreading or compacting shall weigh not less than 20,000 pounds, shall exert a unit tread pressure of not less than 6 pounds per square inch, and shall be operated at speeds not to exceed 3.5 miles per hour.

2.1.2 Tractor-Drawn Sheeps Foot Rollers. Tractor-drawn sheeps foot rollers shall consist of one or more units. Each unit shall consist of a cylindrical drum not less than 60 inches in length and not less than 60 inches in diameter. The drums shall be water, or sand and waterballasted. Each drum shall have staggered feet uniformly spaced over the cylindrical surfaces so as to provide approximately 3 sheeps feet for each two square feet of drum surface. The sheeps feet shall be 7 to 9 inches in clear projection from the cylindrical surface of the roller, and shall have a face area of not less than 5 nor more than 10 square inches. The weight of the roller when fully loaded shall not be less than 4000 pounds per linear foot of drum length and when empty shall not be more than 2500 pounds per foot of drum length. The Contractor shall be required to vary the amount of ballast in the drums to obtain optimum compactive effort for the material being compacted. The rolling units shall be equipped with a suitable device for cleaning the feet. The rolling units of multiple-type sheeps foot rollers shall be pivoted on the main frame in a manner that will permit the units to adapt themselves to uneven ground surfaces and to rotate independently. The roller shall be pulled by a tractor at a speed not to exceed 3.5 miles per hour.

2.1.3 Self-Propelled Sheeps Foot Rollers. At the option of the Contractor, self-propelled sheepsfoot rollers may be used in lieu of tractor-drawn rollers. Self-propelled rollers exceeding the empty weight requirement may be used provided that by the substitution of feet having a face area not exceeding 10 square inches, the nominal foot pressure on the feet of the self-propelled roller may be adjusted to approximate the nominal foot pressure of the towed roller for the particular working condition required for the towed rollers. The feet shall have a 7-inch to 9-inch projection from the cylindrical surface of the roller. For self-propelled rollers, in which steering is accomplished through use of rubber-tired wheels, the tire pressure shall not exceed 40 pounds per square inch. Self-propelled rollers shall be operated at a speed not to exceed 3.5 miles per hour.

2.1.4 Alternative Compaction Equipment. The Contractor may propose for use alternative types of compaction equipment not included in these

specifications. The suitability of the alternative equipment shall be demonstrated to the Contracting Officer by a field test conducted by and at the expense of the Contractor. The alternative compaction equipment shall be capable of properly compacting the soil so that no planes of weakness or laminations are formed in the fill. The field test shall consist of compacting a minimum of three layers of an area of embankment with the alternative type equipment. Testing and inspection of the area shall then be performed by the Contractor at no additional cost to the Government. Procedures for constructing and testing the area shall be provided by the Contracting Officer. Each proposed alternative type of equipment shall be capable of compacting a layer of soil not less than 12 inches thick. A minimum of five complete passes over each layer of the test fill shall be required for each type of alternative equipment that is allowed for use, unless in the course of constructing the test fill the Contractor is able to demonstrate that proper compaction can be obtained with fewer passes. Alternative type equipment shall be operated at speeds not to exceed 3.5 miles per hour. If sufficient previous testing has been performed on the alternative compaction equipment proposed by the Contractor to verify the suitability of the equipment to the Contracting Officer's satisfaction, the Contracting Officer may determine that the abovespecified field test is not required.

2.1.5 Sprinkling Equipment. Sprinkling equipment used for moisture control shall be designed to apply water uniformly and in controlled quantities to variable widths of surface.

2.1.6 Miscellaneous Equipment. Scarifiers, disks, trash pumps, ditching equipment, power tampers, and other equipment shall be types suitable for construction of embankment.

## 2.2 MATERIALS.

2.2.1 General. The road and boat ramp shall be constructed with Contractor-furnished borrow from a Government-approved commercial source. The road and boat ramp shall be constructed of impervious fill that is free from unsuitable and frozen materials. Unless otherwise specified, material classified by the Unified Soil Classification System as gravels (GW, GP, GM), sands (SW, SP, SM), and non-plastic silts (ML) shall not be used, unless suitably blended with less pervious material to the extent that it no longer classifies as these materials.

2.2.1.1 Contractor-Furnished Borrow The Contractor shall furnish borrow to be used for backfill material. The borrow shall come from a Government-approved, commercial source. The character of the material therein, as indicated by Government-selected tests of soil samples performed by an independent, Corps of Engineers certified laboratory at the Contractor's expense, must be adequate for the intended use. The Contractor shall demonstrate compliance by furnishing the test results from a minimum of three soil samples. The Contractor shall maintain constant quality control due to variables in the soil. The borrow material shall be free of deleterious chemicals which would impede satisfactory growth of grass as provided in SECTION 02935 - ESTABLISHMENT OF TURF. No time extension in contract completion will be granted for delays incurred in obtaining Contractor-furnished borrow areas. The Contractor shall be solely responsible for any and all damages, claims for damages, and liability of any nature whatsoever arising from or growing out of the use of Contractor-furnished borrow areas. A source list for contractor-furnished borrow is provided at the end of Section 00800 - SPECIAL CLAUSES.

2.2.2 Impervious Materials. Impervious materials are those designated as CH, CL, and ML by the Unified Soil Classification System.

2.2.3 Unsuitable Materials. Materials which are classified as unsuitable for embankment material are defined as masses of organic matter, sticks, branches, roots, and other debris. It also includes materials that do not meet the soil classifications listed for suitable fill. Not more than 1 percent by volume of objectionable material shall be contained in the earth material placed in each cubic yard of the embankment section. Pockets and/or zones of wood shall not be placed in the embankment.

2.2.4 Frozen Materials. Under no circumstances shall frozen earth, snow or ice be placed in an embankment.

### PART 3 - EXECUTION

#### 3.1 FOUNDATION PREPARATION.

3.1.1 General. After clearing, grubbing, and stripping, the entire earth surface on or against which fill is to be placed shall be thoroughly scarified to a depth of 6 inches. If for any cause, this scarified surface becomes compacted in such a manner that, in the opinion of the Contracting Officer, a plane of weakness might be induced, it shall again be adequately scarified before depositing material thereon.

3.1.2 Drainage. All foundations receiving fill and all partially completed fill shall be kept thoroughly drained. The Contractor shall drain or pump water from any area to receive fill.

3.1.3 Frozen Ground. Fill shall not be placed upon frozen ground.

#### 3.2 CONSTRUCTION.

3.2.1 Existing Stone Embankment. Prior to placing the impervious fill over the existing stone embankment, eight inches of bedding material shall be spread over the stone (see Section 02270, STONE PROTECTION). Geotextile fabric shall be placed over the bedding material as an interface between the bedding and the impervious fill (see Section 02240, GEOTEXTILE). Care shall be taken so as to not rip the geotextile fabric when placing the impervious fill.

#### 3.2.2 Impervious Fill.

3.2.2.1 General. Impervious fill shall not be placed in water, or on wet, saturated or loose ground. Wet ground shall be disked or allowed to dry until firm enough to permit fill placement, or the wet ground shall be removed at no additional cost to the Government. The materials for fill shall be placed or spread in layers, the first layer not more than 6 inches in thickness and the succeeding layers not more than 8 inches in thickness prior to compaction. Layers shall be started full out to the slope stakes and shall be carried substantially horizontal and parallel to the roadway centerline with sufficient crown or slope to provide satisfactory drainage during construction. Care shall be taken when placing the first layer over the geotextile fabric on the stone embankment to not rip or tear the fabric. If the fabric becomes ripped, it shall be replaced as specified in Section 02240, Geotextile. Benching into the slope of the existing embankment is required in order to place and compact the material in horizontal layers. The vertical face of the existing embankment resulting from the benching operation shall be a minimum of one foot in height but shall not exceed two feet in height. When the surface of any compacted layer is too smooth to bond properly with the succeeding layer, it shall be adequately scarified to a depth of 6 inches before the next layer is placed thereon.

3.2.2.2 Moisture Control. The materials in each layer of the fill



shall be tested in accordance with ASTM D 2216 and shall contain the amount of moisture, within the limits specified below or as directed by the Contracting Officer, necessary to obtain the desired compaction as determined by ASTM D 698. Material that is not within the specified limits after compaction shall be reworked, regardless of density. The moisture content after compaction shall be as uniform as practicable throughout any one layer of impervious materials. The moisture content after compaction shall be within the limits of plus 2 percentage points above optimum and minus 2 percentage points below optimum moisture content as determined by the Contracting Officer. Material that is too wet shall be spread on the fill and permitted to dry, assisted by disking or harrowing, if necessary, until the moisture content is reduced to an amount within the specified limits. When the material is too dry, the Contractor shall be required to sprinkle each layer on the fill. Harrowing, or other approved methods shall be required to work the moisture into the material until a uniform distribution of moisture is obtained. Water applied on a layer of fill shall be accurately controlled in amount so that free water shall not appear on the surface during or subsequent to rolling. Should too much water be added to any part of the fill, so that the material is too wet to obtain the desired compaction, the rolling on that section of fill shall be delayed until the moisture content of the material is reduced to an amount within the specified limits. If it is impracticable to obtain the specified moisture content by wetting or drying the material on the fill, the Contractor may be required to prewet or dry back the material at the sources of excavation. If, in the opinion of the Contracting Officer, the top or contact surfaces of the partial fill section become too dry to permit suitable bond between these surfaces and the additional fill to be placed thereon, the Contractor shall loosen the dried materials by scarifying or disking to such depths as may be directed by the Contracting Officer, shall dampen the loosened material to an acceptable moisture content, and shall compact this layer in accordance with the requirements of this paragraph.

3.2.2.3 Compaction. Compaction of impervious material shall be accomplished with approved equipment specified in Section 02222-2.1. The moisture content and conditions of each spread layer shall conform to the specifications and each layer of material shall be compacted to at least 95 percent of the maximum dry density as determined in accordance with ASTM D 698. Determination of in-place density shall be in accordance with ASTM D 1556 or ASTM D 2937. The Contractor shall ensure that its compaction methods do not damage any existing utilities. Any damage caused by the Contractor's operation shall be repaired at the Contractor's expense.

3.2.2.4 Additional Compaction. If, in the opinion of the Contracting Officer, the desired compaction of any portion of the fill has not been secured, the Contractor shall make additional efforts over the surface area of such designated portion until the desired compaction has been obtained.

3.2.3 Dressing. The entire fill shall be brought to not less than the prescribed design cross section within allowable tolerance, at all points. Unreasonable roughness of surface shall be dressed out to permit turfing operations.

3.2.4 Care of Water. The foundation receiving fill material and all partially completed fill shall be kept thoroughly drained. The Contractor shall control the earthwork to prevent water from flowing into the work area.

3.3 CROSS SECTIONS OF MATERIALS. Unless otherwise specified, the dimensions and slopes shall conform to the applicable cross sections, within allowable tolerance, shown on the drawings.

3.4 GRADE TOLERANCES. All fill shall be constructed to the design grade and cross section shown on the drawings. For all fill, at all points, a tolerance of 1/10 of 1 foot at the crown and 3/10 of 1 foot elsewhere above or

below the prescribed design grade and cross section shown will be permitted in the final dressing provided that the crown of the spoil bank drains, there are no abrupt humps or depressions in surfaces or bulges in the width of the crown, and the side slopes are uniform. Any partial fill or temporarily stockpiled material placed within the design section shall not exceed the design grade or design slopes of the embankment by more than one foot, and shall have side slopes not steeper than 1V on 2H.

### 3.5 TESTING.

3.5.1 Soil Classification Tests. Soil classification tests shall be performed in accordance with ASTM D 2487. The Contractor shall furnish the results of the initial classification test for each material from each designated borrow source at least 3 days prior to placing the fill. The Contractor shall perform one test for each designated borrow area. Additional tests may be required by the Contracting Officer if the material in any borrow area appears to be noticeably different from that which was tested.

3.5.2 Moisture Density Relationships. The moisture-density relations of the impervious fill material shall be determined in accordance with ASTM D 698, Method A. The Contractor shall furnish the results of the initial moisture density test for each material from each designated borrow area at least 3 days prior to placing the fill. The Contractor shall perform one test for each designated borrow area. Additional tests may be required by the Contracting Officer if the material in any borrow area appears to be noticeably different from that which was tested.

3.5.3 In-Place Density Testing. The in-place density of the impervious fill materials shall be accomplished at the direction of the Contracting Officer in accordance with ASTM D 2937 or ASTM D 1556. A minimum of one field density test per lift of backfill for every 200 linear feet of embankment construction shall be performed. The in-place soil density shall be compared to the requirements of 02222-3.2.2.3. Fill not meeting the required specifications for in-place density shall be retested, at no additional cost to the Government, after additional compaction has been completed.

3.5.4 Water (Moisture) Content Tests. Determination of in-place water content shall be performed in accordance with ASTM D 2216 and shall be performed on all in-place density tests. Embankment fill not meeting the required specifications for water content shall be retested, at no additional cost to the Government, after corrective measures have been applied.

3.5.5 Additional Testing. The Contracting Officer may request additional tests if:

- (1) There is reason to doubt the adequacy of the compaction.
- (2) Special compaction procedures are being used.
- (3) Materials change and the Contracting Officer determines that the Contractor's testing is inadequate.

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## SECTION 02240 - GEOTEXTILE

### PART 1 GENERAL

1.1 SCOPE. The work provided for herein consists of furnishing all plant, labor, material, and equipment and performing all operations required for furnishing, hauling, and placing the geotextile, complete, as specified herein and shown on the contract drawings, and maintaining the geotextile until acceptance.

#### 1.2 QUALITY CONTROL.

1.2.1 General. The Contractor shall establish and maintain quality control for operations under this section to assure compliance with contract requirements and maintain records of its quality control for all materials, equipment, and construction operations, including but not limited to the following:

- (a) Materials
- (b) Installation

1.2.2 Reporting. A copy of the records of inspection and tests, as well as the records of corrective action taken, shall be furnished to the Government, daily.

1.3 APPLICABLE PUBLICATIONS. The following publications of the current issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto.

#### 1.3.1 American Society for Testing and Materials (ASTM).

D 3786-87	Hydraulic Bursting Strength of Knitted Goods and Nonwoven Fabrics - Diaphragm Bursting Strength Tester Method
D 4632-91	Grab Breaking Load and Elongation of Geotextiles
D 4751-95	Determining Apparent Opening Size of a Geotextile
D 4833-88	Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products

1.4 SUBMITTALS. The Contractor shall submit to the Contracting Officer for approval in accordance with SECTION 01300 - SUBMITTAL PROCEDURES, certificates of compliance attesting that the geotextile meets specification requirements.

1.4.1 Certificates. GA. Submit certificates of compliance attesting that the geotextile meets specification requirements.

1.5 SHIPMENT AND STORAGE. The geotextile shall be furnished in a protective wrapping which shall protect the geotextile from direct sunlight, ultra-violet rays, temperatures greater than 140 degree Fahrenheit, mud, dirt, dust and debris. To the extent possible, the fabric shall be maintained wrapped in a heavy duty protective covering.

## PART 2 PRODUCTS

2.1 GEOTEXTILE. The geotextile shall be of nonwoven or woven sheet construction and consist of long chain polymeric fabric composed of polypropylene, polyethylene, polyester, polyamide or polyvinylidene-chloride fibers weighing 4.0 to 5.0 ounces per square yard, and shall contain stabilizers and/or inhibitors added to the basic plastic if, necessary, to make the filaments resistant to deterioration due to ultraviolet and heat exposure. The fibers shall be oriented into a random web and stabilized whereby they retain their positions relative with each other. The geotextile shall be free of any chemical treatment or coating which reduces permeability and shall be inert to chemicals commonly found in soil. The edges of the geotextile shall be finished to prevent the outer fiber from pulling away from the geotextile. The geotextile shall conform to the following physical property requirements:

<u>Physical Property</u>	<u>Test Procedure</u>	<u>Acceptable Values*</u>
Tensile Strength (Wet)	ASTM D 4632	120 pound minimum in any principal direction
Elongation - (Wet)	ASTM D 4632	At least 15 percent but no greater than 80 percent in any principal direction
Apparent Opening Size	ASTM D 4751	No finer than No. 100 No coarser than No. 70 U.S. Standard Sieve
Puncture Strength	ASTM D 4833	75 pounds minimum
Mullen Burst Strength	ASTM D 3786	300 pounds per square inch minimum

\*Unless stated otherwise all numerical values represent average roll values (i.e. any roll in a lot should meet or exceed the minimum value but not exceed the maximum value listed in the table.)

## PART 3 EXECUTION

3.1 INSTALLATION. The geotextile shall be placed in the manner and locations shown on the drawings. At the time of installation the geotextile shall be rejected if it has defects, rips, holes, flaws, deterioration or damage incurred during manufacturing, transportation, storage or installation and shall be replaced at no additional cost to the Government. The surface to receive the geotextile shall be prepared to a relatively smooth condition free of obstructions, depressions and debris. Erosion features such as rills, gullies, etc. shall be graded out of the surface before geotextile placement. The geotextile shall be laid smooth and free of tension, stress folds, wrinkles or creases.

3.2 PROTECTION. The geotextile shall be protected at all times during construction from contamination by surface run-off and any geotextile so contaminated shall be removed and replaced with uncontaminated geotextile. The geotextile shall be covered with aggregate within 24 hours of placement. Any damage to the geotextile during its installation or during placement of aggregate shall be replaced by the Contractor at no cost to the Government.

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SECTION 02270  
STONE PROTECTION

PART 1 - GENERAL

1.1 SCOPE. The work provided for herein consists of furnishing all plant, labor, equipment and materials, and performing all operations in connection with the construction of the stone protection, including foundation preparation, bedding layer for the slopes, placement of the aggregate drain material, and elsewhere as shown on the contract drawings, in accordance with these specifications and the contract drawings.

1.2 QUALITY CONTROL.

1.2.1 General. The Contractor shall establish and maintain quality control for all stone protection operations to ensure compliance with contract requirements, and shall maintain records of the quality control for all construction operations, including but not limited to the following:

- (1) Foundation preparation (line and grade).
- (2) Inspection at the worksite to ensure use of specified materials.
- (3) Bedding layer gradation and placement.
- (4) Riprap gradation and placement.
- (5) Aggregate drain material gradation and placement.

1.2.2 Reporting. A copy of the records of inspection and tests, as well as the records of corrective action taken, shall be furnished the Government daily.

1.3 REFERENCES. The following issues of the publications listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto:

1.3.1 American Society for Testing and Materials (ASTM).

C 127-88(R 1993)      Standard Test Method for Specific Gravity and Absorption of Coarse Aggregate

C 136-96a              Sieve Analysis of Fine and Coarse Aggregates

1.3.2 Illinois Standard Specifications. The aggregate drain material shall conform to the provisions of the hereinafter cited sections and, as specified articles of the Illinois Department of Transportation, "Standard Specifications for Road and Bridge Construction" adopted January 1, 1997 except as noted herein. The term "Engineer" as used therein shall be interpreted to mean "Contracting Officer."

1.4 SUBMITTALS. Government approval is required for submittals with a GA designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01300 SUBMITTAL PROCEDURES:

1.4.1 Source of Stone. GA. A list of all stone source or sources shall be submitted at least 30 days prior to any placement of stone protection.

1.4.2 Gradation Test Data. FIO. The results of all gradations shall be submitted within 24 hrs. after completion of the test.

1.4.3 Certified Weight Tickets. FIO.

1.4.4 Method of Placement. FIO. A detailed description of the method for placing the bedding, riprap and aggregate drain material shall be submitted at least 30 days prior to any placement of material.

## PART 2 - PRODUCTS

### 2.1 MATERIALS.

2.1.1 Stone. All stone shall be durable material as approved by the Contracting Officer. The sources from which the Contractor proposes to obtain the materials shall be selected well in advance of the time when the material will be required. Stone for riprap shall be of a suitable quality to ensure permanence in the structure and in the climate in which it is to be used. It shall be free from cracks, seams, and other defects that would tend unduly to increase its deterioration from natural causes. The inclusion of objectionable quantities of dirt, sand, clay, and rock fines will not be permitted.

2.1.1.1 Sources and Evaluation Testing. Stone for bedding and riprap shall be produced from the sources listed at the end of SECTION 00800. The Contractor shall submit suitable test reports and service records to show the acceptability of the stone. If the Contractor proposes to furnish stone from a source not currently listed, the Contractor will make such investigations as necessary to determine whether acceptable stone can be produced from the proposed source. Satisfactory service records on work outside the Corps of Engineers will be acceptable. If no such records are available the Contractor will make tests to assure the acceptability of the stone. The tests to which the stone may be subjected will include petrographic analysis, specific gravity, abrasion, absorption, wetting and drying, freezing and thawing, and such other tests as may be considered necessary by the Contracting Officer. The following guidance is provided for use by the Contractor in analyzing a new source of stone. Stone that weighs less than 150 lbs./c.f. and has more than 2 percent absorption will not be accepted unless other tests and service records show that the stone is satisfactory. The method of test for unit weight and absorption will be CRD-C 107-94, "Standard Test Method for Specific Gravity, and Absorption of Coarse Aggregate." Samples shall be taken by the Contractor under the supervision of the Contracting Officer in advance of the time the placing of the stone is expected to begin. The tests will be conducted by the Contractor in accordance with applicable Corps of Engineers methods of tests given in the Handbook for Concrete and Cement, and will be performed at a testing laboratory approved by the Contracting Officer. The cost of testing will be borne by the Contractor.

2.1.1.2 Gradation Test. The Contractor shall perform a gradation test on riprap at the quarry in accordance with "LMVD Standard Test Method for Gradation of Riprap", a copy of which is attached at the end of this section. At least one gradation test shall be performed. The sample shall be taken by the Contractor under the supervision of the Contracting Officer, shall consist of not less than 15 tons of riprap and shall be collected in a random manner

which will provide a sample which accurately reflects the actual gradation arriving at the jobsite. If collected by the truckload, each truckload shall be representative of the gradation requirements. The Contractor shall provide all necessary screens, scales and other equipment, and the operating personnel therefor, and shall grade the sample, all at no additional cost to the Government. The contractor shall perform at least one gradation test in accordance with ASTM C 136 on the bedding material and the aggregate drain material. The gradation tests shall be reported using LMV Form 602-R, Gradation Test Data Sheet, a copy of which is attached at the end of this section. Additional tests, at the Contractor's expense, will be required if the stone furnished appears by visual inspection to be of questionable gradation.

2.1.2 Bedding Material. Bedding shall consist of crushed stone.

2.1.2.1 Material. The crushed material shall be composed of tough, durable particles, and shall be reasonably free from thin, flat and elongated pieces, and shall contain no organic matter nor soft, friable particles in quantities considered objectionable by the Contracting Officer. Grading shall conform to the following requirements:

<u>Permissible Limits</u>	
<u>U.S. Standard Sieve</u>	<u>Percent by Weight Passing</u>
3-inch	90-100
1 1/2-inch	35-70
No. 4	0-5

Crushed stone shall be well-graded between the limits shown. All points on individual grading curves obtained from representative samples of bedding material shall lie between the boundary limits as defined by smooth curves drawn through the tabulated grading limits plotted on a mechanical analysis diagram. The individual grading curves within these limits shall not exhibit abrupt changes in slope denoting either skip grading or scalping of certain sizes or other irregularities which would be detrimental to the proper functioning of the bedding layers.

2.1.3 Riprap. Riprap shall be placed on the bedding layer specified in paragraphs 3.1 and 3.2 within the limits shown on the contract drawings. Quarried rock only shall be used. Riprap shall be as specified herein. Gradation shall conform to the tables below and to the gradation curves attached at the end of this section, and formats thereof shall be as shown. Neither the width nor the thickness of any piece shall be less than onethird of its length.

TABLE I

400 LB. TOPSIZE RIPRAP

<u>Percent Lighter by Weight (SSD)</u>	<u>Limits of Stone Weight, lb.</u>
100	160-400
50	80-160
15	30-80

2.1.4 AGGREGATE DRAIN MATERIAL. The aggregate drain material shall be a gravel material conforming to the requirements of SECTION 1004.01, COARSE AGGREGATE, CA-11, Illinois Department of Transportation, "Standard Specifications for Road and Bridge Construction" adopted January 1, 1997.

## PART 3 - EXECUTION

3.1 BASE PREPARATION. Areas on which bedding layers and riprap are to be placed shall be trimmed and/or dressed to conform to cross sections shown on the contract drawings within an allowable tolerance of plus 3 inches and minus 3 inches from the theoretical (slope) lines and grades. Where such areas are below the allowable minus tolerance limit they shall be brought to grade by being filled with bedding material. No additional payment will be made for any material thus required. Immediately prior to placing the bedding layer the prepared base will be inspected by the Contracting Officer and no material shall be placed thereon until that area has been approved.

### 3.2 PLACEMENT OF BEDDING LAYERS.

3.2.1 General. A bedding layer shall be placed on the prepared base as described in paragraph 3.2.2, in accordance with either the details shown on the contract drawings and within the limits as shown on the contract drawings, or staked in the field to form a backing for the stone protection.

3.2.2 Placement of Crushed Stone Bedding Material on Prepared Base Crushed stone bedding material shall be spread uniformly on the prepared base to the lines and grades as indicated on the contract drawings and in such manner as to avoid damage to the prepared base. Placing of crushed stone bedding material by methods which tend to segregate the particle sizes within the bedding layer will not be permitted. Any damage to the surface of the prepared base during placing of the bedding material shall be repaired before proceeding with the work. Bedding material may be placed subaqueously in water depths not to exceed 3 feet. Compaction of bedding material placed on the prepared base will not be required, but the bedding layer shall be finished to present a reasonably even surface, free from mounds or windrows.

3.3 PLACEMENT OF RIPRAP. Riprap shall be placed on the bedding layer specified in paragraphs 3.1 and 3.2 within the limits shown on the contract drawings.

3.3.1 Placement. Riprap shall be placed in a manner which will produce a reasonably well-graded mass of rock with the minimum practicable percentage of voids, and shall be constructed, within the specified tolerance, to the lines and grades either shown on the contract drawings or staked in the field. A tolerance of +/- 6 inches for the 400-lb. topsize riprap, from the slope lines and grades shown on the contract drawings will be allowed in the finished surface of the riprap, except that the extreme of this tolerance shall not be continuous over an area greater than 200 square feet. Riprap shall be placed to its full course thickness in one operation and in such manner as to avoid displacing the bedding material. The larger stones shall be well distributed and the entire mass of stones in their final position shall be graded to conform to the gradation specified in paragraph 2.1.3. The finished riprap shall be free from objectionable pockets of small stones and clusters of larger stones. Placing riprap in layers will not be permitted. Placing riprap by dumping it into chutes, or by similar methods likely to cause segregation of the various sizes, will not be permitted. Riprap may be placed subaqueously in water depths not to exceed 3 feet. Placing riprap by dumping it at the top of the slope and pushing it down the slope will not be permitted. The desired distribution of the various sizes of stones throughout the mass shall be obtained by selective loading of the material at the quarry or other source, by controlled dumping of successive loads during placing, or by other methods of placement which will produce the specified results. All dump trucks used for placing stone shall be equipped with bottomhinged tailgates. The gate releasing mechanism shall be arranged so that it may be operated only from a location at or near the front of the truck. Each truckload shall be representative of the gradation requirements. Rearranging

of individual stones by mechanical equipment or by hand will be required to the extent necessary to obtain a reasonably well-graded distribution of stone sizes as specified above. The Contractor shall maintain the riprap until accepted and any material displaced prior to acceptance and due to the Contractor's negligence shall be replaced at its expense and to the lines and grades shown on the contract drawings.

### 3.4 PLACEMENT OF AGGREGATE DRAIN MATERIAL.

3.4.1 PLACEMENT. The aggregate drain material shall be spread uniformly on the prepared base to the lines and grades as indicated on the contract drawings and in such manner as to avoid damage to the prepared base. Placing of the aggregate drain material by methods which tend to segregate the particle sizes within the layer will not be permitted. Any damage to the surface of the prepared base during placing of the aggregate drain material shall be repaired before proceeding with the work. The aggregate drain material shall be compacted with a vibratory compactor having an operating weight of at least 240 pounds with a centrifugal force of 5200 pounds. A minimum of 6 passes shall be performed. The bedding layer shall be finished to present a reasonably even surface, free from mounds or windrows.

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## STANDARD TEST METHOD FOR GRADATION OF RIPRAP

- A. Select a representative sample (Note No. 1), weigh and dump on hard stand.
- B. Select specific sizes (see example) on which to run "individual weight larger than" test. (See Note No. 2). Procedure is similar to the standard aggregate gradation test for "individual weight retained."
- C. Determine the largest size stone in the sample. (100 percent size)
- D. Separate by "size larger than" the selected weights, starting with the larger sizes. Use reference stones, with identified weights, for visual comparison in separating the obviously "larger than" stones. Stones that appear close to the specific weight must be individually weighed to determine size grouping. Weigh each size group, either individually or cumulatively.
- E. Paragraph d above will result in "individual weight retained" figures. Calculate individual percent retained (heavier than), cumulative percent retained, and cumulative percent passing (lighter than). Plot percent passing, along with the specification curve on Eng Form 4055.

## Notes

1. Sample Selection. The most important part of the test and least precise is the selection of a representative sample. No "standard" can be devised; larger quarry run stone is best sampled at the shot or muck pile by given direction to the loader; small graded riprap is best sampled by random selection from the transporting vehicles. If possible, all parties should take part in the sample selection, and agree before the sample is run, that the sample is representative.
2. Selection of Size for Separation. It is quite possible and accurate to run a gradation using any convenient sizes for the separation, without reference to the specifications. After the test is plotted on a curve, the gradation limits may be plotted. Overlapping gradation with this method are no problem. It is usually more convenient, however, to select points from the gradation limits, such as the minimum 50 percent size, the minimum 15 percent size, and one or two others, as separation points.

Example GradationSpecifications

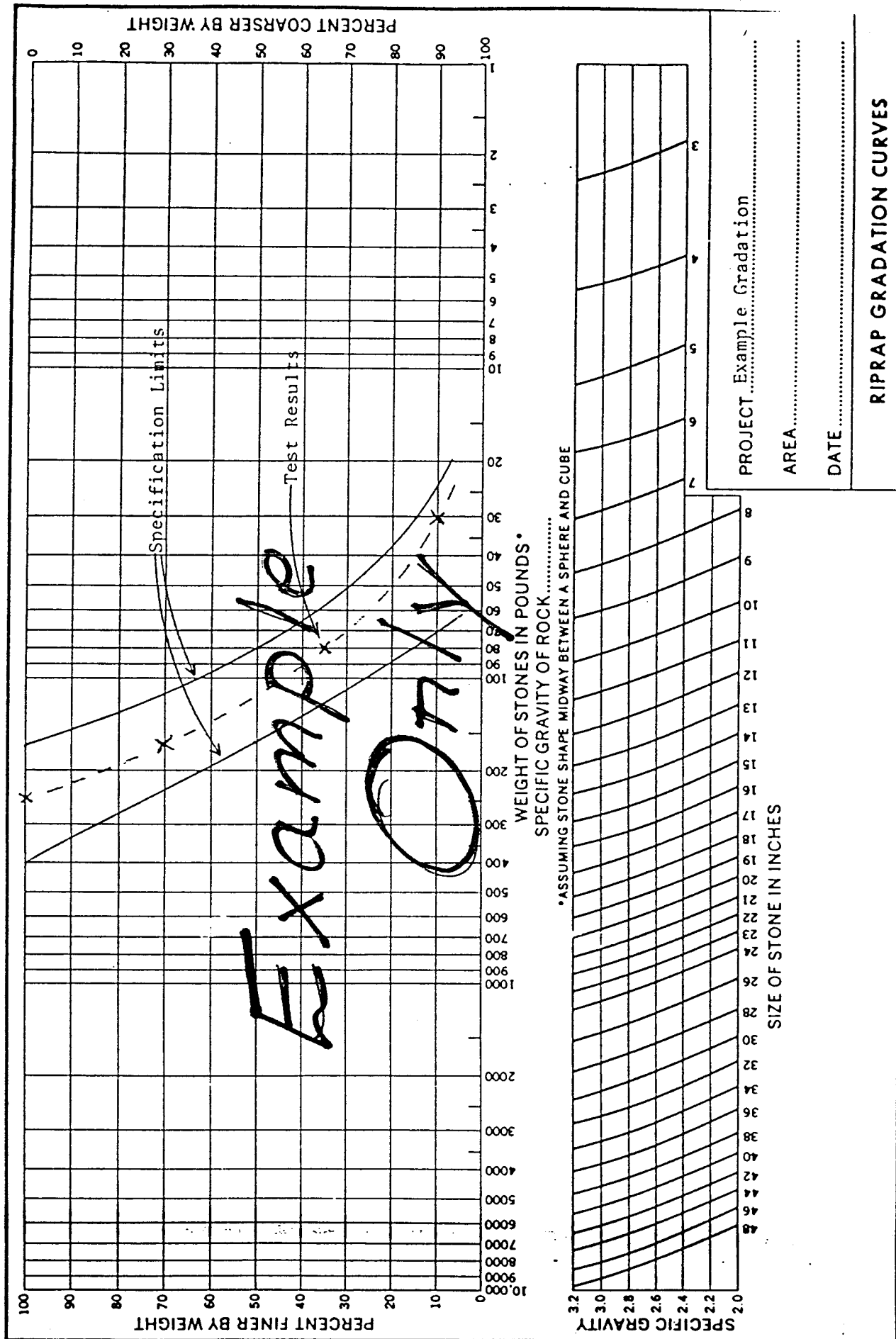
<u>Stone Weight in Lbs</u>	<u>Percent Finer by Weight</u>
400-160	100
160-80	50
80-30	15

Example Worksheet

<u>Stone Size Lbs</u>	<u>Individual Wt. Retained</u>	<u>Individual Percent Retained</u>	<u>Cumulative Percent Retained</u>	<u>Cumulative Percent Passing</u>
400	0	0	-	100
160	9,600	30	30	70
80	11,200	35	65	35
30	8,000	25	90	10
30	<u>3,200</u>	10	100	-
	32,000 lbs			

NOTE:  
Largest stone 251 lbs





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# GRADATION TEST DATA SHEET

Sample No.: \_\_\_\_\_  
 Type of \_\_\_\_\_  
 Stone Tested \_\_\_\_\_  
 Quarry \_\_\_\_\_  
 Date of Test \_\_\_\_\_ Testing Rate \_\_\_\_\_ Tons  
 Contractor \_\_\_\_\_ Location \_\_\_\_\_

## TEST REPRESENTS

Tons

[illegible]

## GRADATION

**Specification**  
**% Finer by wt**

Total Weight					

Remarks: \_\_\_\_\_

I certify that the above stone sample is representative of the total tonnage covered by this test report:

Contractor Representative \_\_\_\_\_

Government Representative \_\_\_\_\_

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SECTION 02500  
ROADS

PART 1 - GENERAL

1.1 SCOPE. The work covered by this section consists of furnishing all plant, labor, equipment and materials, and performing all operations in connection with the construction of the roads.

1.2 QUALITY CONTROL.

1.2.1 General. The Contractor shall establish and maintain quality control for all operations to assure compliance with contract requirements and maintain records of quality control for all construction operations, including but not limited to the following:

- (1) Foundation preparation.
- (2) Inspection at the worksite to ensure use of specified materials.
- (3) Geotextile placement.
- (4) Crushed aggregate base course: material gradation, stone quality, placement and compaction.
- (5) Prime coat: material quality and application.
- (6) Bituminous concrete: mix, temperature, placing, density, lines and grade. At the beginning of production the Contractor shall run an extraction test in conformance with ASTM D 2172 and sieve test in conformance with ASTM C 136 on each of the asphaltic concrete mixtures being used. Additional extraction and sieve tests, at the Contractor's expense will be required by the Contracting Officer if the material appears unacceptable.
- (7) Concrete curbing.
- (8) Pavement marking: paint quality, application rate, and placement.

1.2.2 Reporting. A copy of these records and tests, as well as the records of corrective action taken, shall be furnished to the Government daily.

1.2.3 Testing by the Government. During the life of this contract, quality assurance test will be performed by the Government to check the work performed by the Contractor for compliance with the specifications. The performance of such tests may cause the Contractor to be temporarily delayed in the prosecution of its work while tests are in progress. Such delays shall not be the basis for additional compensation and time.

1.3 REFERENCES. The following publications of the issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto:

1.3.1 American Association of State Highway and Transportation Officials (AASHTO).

M 248-91

Ready Mixed White and Yellow Traffic Paint

1.3.2 American Society for Testing and Materials (ASTM).

C 136-96a	Sieve Analysis of Fine and Coarse Aggregates
D 698-91	Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/cu. ft. (600kN-m/cu. m.))
D 2172-93	Quantitative Extraction of Bitumen from Bituminous Paving Mixtures

1.3.3 Illinois Standard Specifications. The material for, and construction of the crushed aggregate base course, bituminous concrete pavements, concrete curbing and other appurtenances shall conform to the provisions of the hereinafter cited sections and, as specified articles of the Illinois Department of Transportation, "Standard Specifications for Road and Bridge Construction" adopted January 1, 1997 except as noted herein. The term "Engineer" as used therein shall be interpreted to mean "Contracting Officer."

1.4 SUBMITTALS. Government approval is required for submittals with a GA designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01300 SUBMITTAL PROCEDURES:

1.4.1 Certificates. FIO. A certificate of inspection shall be submitted for each shipment of bituminous concrete used in the work. A certificate of compliance shall be submitted for the aggregate base material indicating the material meets IDOT specification requirements.

1.4.2 Statements. GA. A haul road plan shall be submitted prior to delivering any materials to the site. A minimum of 30 days prior to the laying of bituminous concrete the Contractor shall submit a job mix design for each type of bituminous concrete to be used on the project, prepared in accordance with Article 406.10.

1.4.3 Reports. FIO. Submit certified test reports for the pavement marking materials shipped to the project.

PART 2 - PRODUCTS

2.1 BITUMINOUS CONCRETE PAVEMENT.

2.1.1 General. This work shall consist of the construction of a bituminous concrete binder course and a bituminous concrete surface course on a prepared base, constructed to the lines, grades, and thicknesses at the locations indicated on the plans or as directed by the Contracting Officer. Bituminous concrete pavements shall meet the requirements of Section 406, BITUMINOUS CONCRETE BINDER AND SURFACE COURSE CLASS 1, except as noted herein.

2.1.2 Materials. Materials used in the production of the bituminous concrete binder and surface courses shall meet the requirements of Articles 406.02, 1004.03, 1003.03, 1010.04, 1011, 1012.01 and 1009 except that no Reclaimed Asphalt Pavement (RAP) shall be allowed in the mix. Asphalt cement shall be AC-5 or AC-10.

2.1.3 Equipment and Construction. Equipment used in the production and placement of the bituminous concrete pavements shall meet the requirements of Article 406.03. Construction methods shall meet the requirements of Article 406.04.



2.1.4 Job Mix Design. Mix designs for the specific mixes called for on the plans shall be established by the Illinois Department of Transportation (IDOT) or by the Contractor at his/her option as specified in Article 406.10.

Mix designs provided by IDOT will be acceptable provided the same material sources are used for the materials included in the mix. In the event a job mix design is not available from IDOT the Contractor shall be responsible for the design of the bituminous mixes.

2.1.5 Mixture Criteria. Mixture criteria shall be in accordance with Article 406.13. The bituminous concrete base course shall meet the requirements for a Class I, Type 1, B Mix. The bituminous concrete surface course shall meet the requirements for a Class I, Type 1, C Mix.

## 2.2 AGGREGATE BASE COURSE.

2.2.1 General. This work shall consist of the installation of an aggregate base course over a geotextile, to the lines, grades and thickness indicated on the plans. The geotextile shall be installed in accordance with paragraph 3.6. The aggregate base course shall meet the requirements of SECTION 351, AGGREGATE BASE COURSE except as noted herein.

2.2.2 Materials. The material used in the construction of the aggregate base course shall consist of crushed stone meeting the requirements of SECTION 1004, COARSE AGGREGATES, and further, meeting the gradation requirements for CA 6.

2.3 PRIME COAT. A bituminous prime coat material of MC-30 shall be applied to the prepared aggregate base course in accordance with Article 406.07. The prime coat shall be applied at the rate of 0.30 gallons per square yard. The prime coat shall be allowed to cure until the penetration has been approved by the Contracting Officer, but at no time shall the curing period be less than 24 hours. The Contractor shall take special precautions to prevent overspray of the prime coat and shall cover or otherwise protect concrete curbing to preclude getting prime coat material on them.

2.4 CONCRETE CURBING. Concrete curbing shall be constructed to the lines, grades and dimensions indicated and at the locations shown on the drawings or as directed by the Contracting Officer. Materials and construction methods used in the construction of the concrete curbing shall be in accordance with SECTION 03300 - CONCRETE.

2.5 PAVEMENT MARKING. This item shall consist of the painting of directional arrows and parking stalls on the surface of the parking lot at the locations shown on the plans or as directed by the Contracting Officer. Paint shall meet the requirements of AASHTO M 248. All paint used on this project shall be yellow or blue as required.

## PART 3 - EXECUTION

3.1 PREPARATION OF BITUMINOUS MIXTURES. Bituminous concrete base and surface course material shall be produced in accordance with Article 406.12 by a plant certified by the Illinois Department of Transportation for the production of hot mix asphalt products.

3.2 TRANSPORTATION. Transportation of bituminous concrete material to the job site shall be in accordance with Article 406.14.

3.3 PLACING, COMPACTION, AND JOINTS. Placing of bituminous concrete, compaction methods and requirements and joint construction shall be in accordance with Articles 406.15 - 406.18.

3.4 SMOOTHNESS AND THICKNESS TESTING. After completion of the bituminous surface course the surface shall be tested for grade and smoothness. The surface course shall not vary by more than 1/2-inch from the plan grades. The surface course shall be tested for smoothness with a 16-foot straightedge provided by the Contractor. Pavement with surface variations exceeding 1/4-inch shall be removed and replaced by the Contractor. After the pavement has been tested for grade and smoothness and any corrections necessary have been made, the Contractor shall provide not less than 8 full depth cores of the completed bituminous pavement from the locations determined by the Contracting Officer. The cores shall be a minimum 4 inches in diameter and shall extend the full depth of the bituminous pavement. If the thickness of the combined bituminous concrete base and surface courses is deficient in excess of 1/4-inch as determined by the core measurements, the total area that is deficient in thickness shall be determined by additional cores. The area found deficient shall be removed and replaced to the proper thickness. Any pavement requiring removal and replacement in order to meet the job tolerances with respect to grade, smoothness or thickness shall be accomplished by the Contractor at no additional expense to the Government.

### 3.5 AGGREGATE BASE COURSE.

3.5.1 Construction Requirements. The base course shall be constructed in layers not exceeding 6 inches compacted, except that if test indicate that the required compaction is not being obtained, the lift thickness shall be reduced to facilitate compaction. The aggregate shall be placed so as to prevent segregation of the material. It shall be spread on the prepared subgrade and geotextile by tailgating from trucks to the desired lift thickness or placed with a spreader box or asphalt laydown machine. Dumping the material in piles and spreading with a blade or end loader will not be permitted. The aggregate base material shall be placed within 2 percent of the optimum moisture content and compacted to not less than 100 percent of the maximum dry density as determined by ASTM D 698. A total of 4 in place density tests shall be performed on the aggregate base material.

3.5.2 Grade and Thickness Tolerances. After compaction the aggregate base course shall be tested for grade and smoothness. The finished surface of the aggregate base course shall not vary from plan grade by more the 1 inch. The finished surface shall be relatively smooth and free from ruts, bumps and depressions. After the aggregate base course has been brought to final grade it shall be tested for thickness. When the constructed thickness is less than 90 percent of the specified thickness shown on the plans, aggregate shall be added to obtain the required specified thickness.

3.6 GEOTEXTILE. The geotextile shall be placed in the manner and locations shown on the drawings. The surface to receive the geotextile shall be prepared to a relatively smooth condition free of obstructions, depressions and debris. Erosion features such as rills, gullies, etc. shall be graded out of the surface before geotextile placement. The geotextile shall be laid smooth and free of tension, stress, folds, wrinkles or creases. The geotextile shall be protected at all times during construction from contamination by surface run-off and any geotextile so contaminated shall be removed and replaced with uncontaminated geotextile. Any damage to the geotextile during its installation or during placement of aggregate shall be replaced by the Contractor at no additional cost to the Government.

### 3.7 PAVEMENT MARKING.

3.7.1 Weather Limitations. The painting shall be performed only when the surface is dry, when the atmospheric temperature is above 45°F (7°C), and when the weather is not foggy or windy. Markings shall not be applied when the pavement temperature is greater than 120°F.

3.7.2 Equipment. All equipment for the work shall be approved by the Contracting Officer and shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, and such auxiliary hand-painting equipment as may be necessary to satisfactorily complete the job. The mechanical marker shall be an atomizing spray-type marking machine suitable for application of traffic paint. It shall produce an even and uniform film thickness at the required coverage and shall be designed so as to apply markings of uniform cross sections and clear-cut edges without running or spattering. Brushes or rollers shall not be used to apply the markings.

3.7.3 Preparation of Surface. Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other foreign material which would reduce the bond between the paint and the pavement. The area to be painted shall be cleaned by sweeping and blowing or by other methods as required to remove all dirt, laitance, and loose materials.

3.7.4 Application. Markings shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface have been approved by the Contracting Officer. The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate of 90 to 110 square feet per gallon. The addition of thinner will not be permitted. A period of 30 days shall elapse between placement of the bituminous surface course and application of the paint. The edges of the markings shall not vary from a straight line more than 1/2-inch in 50 feet, and the dimensions shall be within a tolerance of plus or minus 5 percent. The reports shall not be interpreted as a basis for final acceptance. The Contractor shall notify the Contracting Officer upon arrival of a shipment of paint to the job site. All emptied containers shall be returned to the paint storage area for checking by the Contracting Officer.

3.7.5 Protection. After application of the paint, all markings shall be protected from damage until the paint is dry. All surfaces shall be protected from disfiguration by spatter, splashes, spillage, or drippings of paint.

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SECTION 02611  
REINFORCED CONCRETE DRAIN PIPE

## PART 1 - GENERAL

1.1 SCOPE. The work covered by this section consists of furnishing all plant, labor, material, and equipment, and performing all operations necessary for the concrete pipe and appurtenances as specified herein and as shown on the drawings.

## 1.2 QUALITY CONTROL.

1.2.1 General. The Contractor shall establish and maintain quality control for all operations to assure compliance with contract requirements and maintain records of quality control for all construction operations, including, but not limited to the following:

- (1) Compaction
- (2) Installation of reinforced concrete drain pipe.

1.2.2 Reporting. A copy of these records, as well as the records of corrective action taken, shall be furnished to the Government daily.

1.3 APPLICABLE PUBLICATIONS. The following publications of the issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto:

1.3.1 American Society for Testing and Materials (ASTM).

C 76-94	Reinforced Concrete Culvert, Storm Drain and Sewer Pipe
C 361-92	Reinforced Concrete Low-Head Pressure Pipe
C 655-91	Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe
C 923-89	Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes and Laterals
C 1107-91 (Rev A)	Packaged Dry, Hydraulic-Cement Grout (Nonshrink)
D 1310-86 (R 1990)	Flash Point and Fire Point of Liquids by Tag Open Cup Apparatus
D 2822-91	Asphalt Roof Cement
D 3776-85 (R 1990)	Mass per Unit Area (Weight) of Woven Fabric

1.3.2 Illinois Department of Transportation (IDOT). The material for, and construction of the storm drainage system shall conform to the provisions of the hereinafter cited sections and, as specified articles of the IDOT, Standard Specifications for Road and Bridge Construction adopted January 1, 1997 and the "Illinois Highway Standards", except as noted herein. The term "Engineer" as used therein shall be interpreted to mean "Contracting Officer".

1.4 SUBMITTALS. Government approval is required for submittals with a "GA" designation; submittals having and "FIO" designation are for information only. The following shall be submitted to the Contracting Officer in accordance with SECTION 01300 - SUBMITTAL PROCEDURES.

1.4.1 Bituminous Cement. GA. Submit manufacturer's literature certifying compliance with specifications.

1.4.2 Reinforced Concrete Pipe. GA. Submit manufacturer's certificate of compliance for the reinforced concrete pipe.

1.4.3 Geotextile. GA. Submit manufacturer's certificate of compliance for the geotextile material.

1.4.4 Nonshrink Grout. GA. Submit manufacturer's certificate of compliance for the nonshrink grout material; and the method and equipment proposed for grout placement.

## PART 2 - PRODUCTS

2.1 BITUMINOUS CEMENT. Bituminous cement shall conform to ASTM D 2822. The solvent component of the bituminous cement shall have a flash point of not less than 80 degrees F when tested in accordance with ASTM D 1310.

2.2 DRAIN PIPES. The drain pipes shall be reinforced concrete pipe conforming to the requirements of ASTM C 655. All pipe shall be designed to withstand a D-load of 3,650 pounds per linear foot to produce a 0.01-inch crack

2.3 GEOTEXTILE. The geotextile shall be as specified in SECTION 02240 - Geotextile. The geotextile shall have a minimum fabric weight of 6 oz/sq.yd., in accordance with ASTM D 3776.

2.4 NONSHRINK GROUT. The nonshrink grout shall consist of a prepackaged material conforming to the requirements of ASTM C 1107.

2.5 BACKFILL MATERIALS. Materials for pipe foundation fill shall be in accordance with the requirements of SECTION 02222.

2.6 MATERIALS. Materials shall conform to the applicable requirements of IDOT Standard Specifications for Road and Bridge Construction Section 602, CATCH BASIN, MANHOLE, INLET, DRAINAGE STRUCTURES AND VALVE VAULT CONSTRUCTION, ADJUSTMENT, AND RECONSTRUCTION; and SECTION 1000, MATERIALS; except as shown on the drawings or as specified hereinafter.

## PART 3 - EXECUTION

3.1 NONSHRINK GROUT PLACEMENT. Nonshrink grout shall be used to fill the voids between pipe and structures and patching holes in concrete. Temporary forms or collars shall be provided to contain the grout until the grout has set. Grout that has not been placed, for any reason, within 30 minutes after mixing shall not be used and shall be removed from the job site. The Contractor shall submit to the Contracting Officer for approval, the method and equipment proposed for placement of the grout. Thenonshrink grout shall be mixed, placed, and cured in accordance with the manufacturer's recommendations.

3.2 PIPE FOUNDATION. The pipe foundation shall be accurately shaped to accept the lower portion of the concretedrain pipes as shown on the drawings.



Excavation shall be maintained in-the-dry and the Contractor shall be prepared to pump any surface or seepage water.

3.3 BACKFILL PLACEMENT. Placement of pipe foundation fill shall be in accordance with the requirements of SECTION 02222. Material shall not be placed in standing water.

3.4 BACKFILL COMPACTION. Compaction of each layer shall be in accordance with the requirements of SECTION 02222. The backfill within 4 feet horizontally and within a vertical dimension above the pipe as recommended by the pipe manufacturer shall be compacted with the use of mechanical or pneumatic power impact tampers and with manual tampers. Manual tampers shall weigh not less than 20 pounds and have a tamping face not larger than 6 inches by 6 inches. All hand-operated power tampers and vibratory compactors must be field checked prior to their use on the project to assure that the required results can be obtained. Such field checks shall be accomplished under the direction and supervision of the Contracting Officer. Equipment failing to achieve desired results will not be allowed on the project. When compacting under the haunch of pipes, a hand-operated power tamper shall be used to achieve desired density in this area. Such effort will be followed by the use of power or manual tampers working as close to the pipe as possible without damaging the drain pipe.

### 3.5 INSTALLATION OF DRAIN PIPE.

3.5.1 General. Prior to installing the drainage pipe, excavation and foundation preparation shall have been completed as prescribed in paragraph 3.2. Under no circumstances shall the pipe be laid in water, or when conditions or the weather are unsuitable for work. The pipe will be carefully inspected by the Contracting Officer immediately before it is installed and defective pipe will be rejected. Proper facilities shall be provided for lowering sections of pipe into place, and pipe shall be cleaned and lowered into position in such a manner as to avoid damage to the pipe. The pipe shall be laid on a foundation to the grades and alignment as shown on the drawings. The pipe shall be supported in such a manner that does not damage the pipe or pipe joints and such that the pipe is at the grade and alignment shown on the drawings. Each section of pipe shall rest upon the pipe bed for its full length with recesses excavated or formed to accommodate the joints. Any pipe which has its grade or joint disturbed after laying shall be taken up and relaid. Any section of pipe already laid which is found to be defective or damaged shall be taken up and relaid or replaced as directed by the Contracting Officer, without additional cost to the Government.

3.5.2 Pipe Joints. Joints between sections of reinforced concrete pipe shall be in accordance with ASTM C 361. Gaskets shall not have more than one factory-fabricated splice. Gaskets shall be as recommended by the particular manufacturer in regard to use of lubricants, cements, adhesives, and other special installation requirements. Surfaces to receive lubricants, cements, or adhesives shall be clean and dry. Gaskets shall be affixed to the pipe not more than 24 hours prior to the installation of the pipe, and shall be protected from the sun, blowing dust, and other deleterious agents at all times. Gaskets shall be inspected before installing the pipe; any loose or improperly affixed gaskets shall be removed and replaced. The pipe shall be aligned with the previously installed pipe, and the joint pulled together. If, while making the joint, the gasket becomes loose and can be seen through the exterior joint recess when the joint is pulled up to within one inch of closure, the pipe shall be removed and the joint remade.

3.5.3 Geotextile. At the time of installation the geotextile shall be rejected if it has defects, rips, holes, flaws, deterioration or damage incurred during manufacture, transportation, or storage. The geotextile shall be protected at all times during construction from contamination, and any geotextile so contaminated shall be removed and replaced with uncontaminated geotextile. Any geotextile damaged during its installation shall be replaced by the Contractor at no cost to the Government. Prior to placing geotextile, surfaces to receive the geotextile shall be coated with a bituminous cement to hold the geotextile in place. The surface to receive the geotextile shall be prepared to relatively smooth condition, free of obstructions and debris. The geotextile shall be placed smooth and free of tension, stress folds, wrinkles, or creases. All pipe joints shall be wrapped with geotextile for a distance of 3 feet each side of the joint. At the outlet structures and drop inlet, geotextile shall be wrapped 2 feet along the length of the pipe and around the exterior face of the outlet structure and drop inlet radially around the pipe. All geotextile wrapping shall be overlapped 6 inches and secured to prevent displacement during backfilling operations.

3.5.4 Drain Pipe. During installation, the pipe shall be handled with care. After all joining of sections has been accomplished backfill shall be placed as specified.

3.5.5 MANHOLES, INLETS, AND DRAINAGE STRUCTURES. Manholes, inlets and drainage structures shall be constructed to the lines, and grades shown on the plans. Construction requirements shall conform to applicable portions of Articles 602, except as shown on the drawings or as specified hereinafter.

### 3.6 TESTING.

3.6.1 Shop Testing Concrete Pipe. A hydrostatic test shall be made on the watertight joint types proposed. Only one sample joint of each type needs shop testing; however, if the sample joint fails because of faulty workmanship, an additional sample joint may be tested. During the test period, the joint shall be protected from high temperatures that might soften or adversely affect the jointing materials. The possibility that some water may be absorbed by concrete pipes during the test will be considered before rejecting any rubber seals proposed. Performance requirements for joints in reinforced concrete pipe shall conform to ASTM C361 except that tests shall be performed at an internal hydrostatic pressure of 10psi minimum for a 20-minute period. The Contractor shall notify the Contracting Officer 24 hours prior to testing so that a Government representative may be present.

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## SECTION 02710 - LIFT STATION

### PART 1 - GENERAL

1.1 SCOPE. This section covers the furnishing and installation of factory assembled duplex grinder pump lift stations and appurtenances at the locations as specified herein.

#### 1.2 QUALITY CONTROL.

1.2.1 General. The Contractor shall establish and maintain quality control for all operations to assure compliance with contract requirements and maintain records of its quality control for all construction operations, including but not limited to the following:

- (1) Materials
- (2) Fabrication
- (3) Installation
- (4) Tests.

1.2.2 Reporting. A copy of these records and tests, as well as the records of corrective action taken, shall be furnished to the Government daily.

1.3 APPLICABLE PUBLICATIONS. The following publications of the issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto.

#### 1.3.1 American Society for Testing and Materials (ASTM).

- |                       |  |
|-----------------------|--|
| D 1248-84<br>(R-1989) | Polyethylene Plastics Molding and Extrusion Materials  |
| D 1784-92             | Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds |

#### 1.3.2 National Electrical Manufacturers Association (NEMA).

- |          |  |
|----------|--|
| ICS 2-88 | Industrial Control Devices, Controllers and Assemblies |
| MG 1-93  | Motors and Generators                                  |

#### 1.3.3 Underwriters Laboratories, Inc. (UL).

- |                                   |                              |
|-----------------------------------|------------------------------|
| UL 508-93<br>(thru Bull. 3/29/94) | Industrial Control Equipment |
|-----------------------------------|------------------------------|

1.4 GENERAL. The wastewater lift station specified herein consist of a new lift station at the Marina Office Building. The new lift station shall consist of submersible pumps, hoisting guides, access cover, automatic control equipment, venting, and all other necessary piping, valves, and accessories specified herein. The Contractor shall furnish, from the same manufacturer, the pumps, motors, hoisting guides, control panels, and any other equipment unique to the pumping system.

1.5 SUBMITTALS. Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted to the Contracting Officer in accordance with SECTION 01300 - SUBMITTAL PROCEDURES.

1.5.1 Drawings. Equipment; GA. Shop drawings shall be submitted to the Contracting Officer for approval, before installation of any material or equipment, and shall include but not be limited to the following pump, controls, hoisting guides, and access cover. Equipment shall be submitted as one complete package to ensure compatibility.

1.5.2 Data. PVC Pipe; GA. Certification of manufacture date of the pipe shall also be submitted.

## PART 2 - PRODUCTS

### 2.1 MARINA LIFT STATION.

2.1.1 General. The Contractor shall provide and install a fully assembled duplex grinder pump station furnished by the pump manufacturer at the location shown on the drawings. The pump station shall include a fiberglass wetwell for outside installation, vent pipe, lockable wetwell cover and lock, grinder pump and motor, quick disconnect rail system, check valve, junction box, start-stop level controls, motor high temperature shut-off, motor seal leak alarm, high water alarm, all internal wiring terminating into the junction box, shut off valve, and PVC discharge piping. All equipment shall be factory installed, except the control panel, connecting sewer pipes, and pump, which shall be field installed. A control panel, alarm, and alarm light shall be provided by the pump manufacturer as specified herein.

2.1.2 Wetwell. The pump wet well shall be molded of fiberglass reinforced polyester resin manufactured by the layup and spray technique. The interior surfaces shall be smooth and resin rich. The wetwell shall be 48 inches in diameter, 0.25 inches in thickness, and 9 feet deep. A steel anti-flotation plate sufficient enough to overcome the buoyancy forces on the wetwell as specified herein shall be molded into the bottom of the basin. The wetwell shall be vented through a 3" vent pipe. The 3" vent pipe shall be located at an elevation on the basin wall, 1 foot from the top of the wetwell. The vent pipe shall be buried with 1 foot cover and shall run to the marina building and up the side of the building to 6" above the roof line.

2.1.3 Wetwell Cover. The wetwell cover shall be watertight and constructed of polypropylene 0.375 inches in thickness and bolted to the wetwell with stainless steel cap screws with cadmium plated nuts embedded into the fiberglass wetwell. Top of wetwell/cover shall be flush with adjacent ground elevation.

2.1.4 Openings. The Contractor shall provide an inlet flange for the 4 inch sewer pipe from the Marina Office building. The inlet flange shall be field installed at the elevation required for the incoming 4 inch sewer pipe. The Contractor shall provide the necessary transition adaptors to connect the 2 inch PVC SDR 26 pressure sewer to the 1.25 inch discharge flange mounted on the wetwell at a height shown on the drawings. The elevations for all openings in the wetwell basin shall be field verified prior to any work.

2.1.5 Rail Assembly. All guides, brackets and hold-downs shall be of non-sparking, corrosion resistant structural plastic. The guide bars shall be 1 inch fiberglass pipe. The pump shall incorporate structural guide brackets

with guide yokes which guides the pump and induces seat forces on the discharge connection for a leak tight seal. Shims shall not be used to seal the discharge connection. Dual "O" rings shall be provided for the discharge connection to provide a hydraulic seal. The guide brackets and yokes shall be of sufficient bearing strength to prevent binding. A brace located near the top for easy removal capable of withstanding line surges from breaking the seal shall be provided to lock the parts together. The guide rail assembly shall permit easy installation and removal of the pump and check valve without requiring personnel to enter the wetwell. The discharge piping shall run from the discharge base to a coupling through the wetwell wall. The discharge base shall be securely bolted to the wetwell floor so that slight deflections from the discharge pipe shall not cause leakage to occur at the quick-connect pump flange.

2.1.6 Shutoff Valve. A PVC true union ball shutoff valve with teflon seats shall be provided and installed horizontally in the discharge piping. A handle extension shall be provided at an elevation of 6 inches below the basin cover to operate the valve without requiring personnel to enter the wetwell basin. The valve shall have a working pressure of 160psi.

2.1.7 Check Valve. A check valve shall be supplied as an integral part of the discharge seal assembly that lifts out with the pump assembly. The valve shall be constructed with a cast iron body, and shall be equipped with a heavy duty flat stainless steel spring loaded rubber flapper. All fasteners shall be stainless steel. The valve shall be capable of withstanding negative heads up to 5 feet and shall be capable of operating at all pressures experienced in the pressure sewer system created by the grinder pumps.

2.1.8 Anti-Siphon Valve. A PVC anti-siphon valve shall be provided and installed on a riser pipe extending up from the pump discharge between the check valve to within 2 feet of the top of the wetwell basin. The valve shall be mounted horizontally and shall not interfere with pump installation or removal.

## 2.2 SUBMERSIBLE GRINDER PUMP.

2.2.1 Description. The Contractor shall furnish a duplex grinder pump unit with all necessary parts and equipment, and install the pump units in the lift station. The pump units shall be capable of grinding all sewage, including rags, wood, plastic, paper and rubber, into particles small enough to be pumped under pressure into proposed sewer as shown on the drawings.

2.2.2 Pump Capacities. Three pumps shall be furnished; two for installation in the wetwell and one spare pump. The pumps furnished shall be capable of operating without instability at the maximum capacity design point of 30 gpm and the maximum head design point of 35 feet TDH. The design operating point of the pumps furnished shall not be within 20 percent of the pump maximum rated capacity and/or pump shut off points. The grinder pumps operating curve shall be furnished to the Contracting Officer for approval.

2.2.3 Pump. The pumps shall be centrifugal type with volute case and semi-open impeller with pump-out vanes on the back shroud. Grinder impeller shall discharge directly into inlet of centrifugal impeller leaving no exposed shaft to cause packing of ground solids.

2.2.4 Material. The pump and motor housings shall be cast iron and painted with the manufacturer's standard coating. Pump impeller shall be bronze and shall thread onto a stainless steel shaft.

2.2.5 Grinder Unit. The grinder unit shall consist of a primary grinder and a secondary cutter impeller. The parts of the grinder unit shall be stainless steel turning on hardened stainless steel. The complete grinder assembly shall be removable from the pump without disturbing the pump impeller, seals or motor. An extra set of cutters and comb assembly (grinder elements) shall be furnished for each pump station.

2.2.6 The Contractor shall supply with the pumping units, 3 complete operation and maintenance manuals.

2.3 PUMP MOTORS. Pump motors shall be housed in an oil filled watertight casing and shall be NEMA Design B, with Class B insulated stator windings which shall be moisture resistant. The motors shall be rated for 230 volts, single phase, 60 hertz. The pump motors shall have cooling characteristics suitable to permit continuous operation in submerged or non-submerged conditions. The cable junction box within the motor shall be separated from the motor proper by a stator-lead sealing gland to protect the motor should water leak into the junction box. The pump motor cables shall be connected to the motor through a rubber grommet compression seal. The electrical cables shall be suitable for submersible service, and shall be of water-blocking construction; the cable shall have permanent marking showing its water-blocking construction. The cable shall be continuous, without splices or taps, from motor to control panel, and shall include a motor ground conductor for connection in the motor junction box. Waterproof control cables shall be provided for data signals from the thermal sensors wound into the phase belts of the motor the thermal sensors wound into the phase belts of the motor winding, and for the water-in-oil sensor. Motors requiring external heat exchangers or piping which could fracture during normal maintenance procedures will not be acceptable. Acceptance of higher installed running current by utilizing the service factor, if greater than unity, is prohibited. The motor rated horsepower, full load amp rating, operating voltage, phase, service factor, full load speed, and motor manufacturer's name, shall be shown on an externally mounted name plate. The name plate shall be provided by the manufacturer of the motor. Field installation or changing of motor name plates will not be allowed. Any changing of motor name plates required by the Contractor shall be accomplished by the motor manufacturer at the factory, after factory tests on the motor in question have been completed. Results of this factory test shall be submitted to the Contracting Officer.

2.4. MOTOR CONTROLS. Motor controls shall conform to the requirements of NEMA ICS 2 and UL 508.

2.4.1 NEMA 4X Pump Motor Control Panel. Service to the panel shall be 240 volts, single-phase, 60 Hertz, 3-wire. All items shall be installed inside the control panel enclosure, except for the red polycarbonate High Wetwell Level Strobe Light with cast protective guard, which shall be hub connected by a gasketed Myers "ScruTite" hub to the top outside of the control enclosure. Capacitors and controls required with the single phase motors shall be mounted in the lowest section of the control panel.

2.4.1.1 A main 2 pole circuit breaker shall be furnished. For each pump motor there shall be furnished an individual combination type two pole motor starter with circuit breaker, 120 vac operating coil, 2 manual-reset ambient-compensated thermal overloads sized to the full load amperes of the motor actually installed, a "Hand" - "Off" - "Automatic" selector switch, "Stop", "Start" push buttons, a red "Run" pilot light, and an elapsed time meter. Circuit breakers and combination circuit breaker motor starters shall be sized as shown on the Drawing, and shall be appropriate to the pump motor



sizes installed. Control voltage shall be 120 vac from the 120/240 vac service and shall be protected by a circuit breaker of capacity to carry the full connected 120 vac load. Each motor shall have over-temperature sensing thermostats wound into the windings of the pump motor, which shall automatically reset to the closed circuit condition when cool. A seal leak detector shall open its circuit when sensing the presence of water-in-oil in the submerged motor. The detector shall be connected in series with the over-temperature sensors to disconnect the machine from the line in the event of either over-temperature or water-in-oil. In the circuit diagram, a neon indicator lamp shall be connected across the series combination of these device, to glow when either of the sensors have opened and halted the motor. An override circuit shall be included which will automatically start the second pump if the first pump fails to give adequate delivery, allowing the water level to rise to the level where the second pump needs to be started. An interlock circuit shall be included to prevent simultaneous manual operation of both pumps. An alternator shall be provided to equalize the running time for each motor. The panel shall be equipped with a bonded silicone rubber embedded electrical heater of 150 watts capacity, bonded to its backplane, and an adjustable thermostat, single pole single-throw, line-voltage type and adjustable from 40 to 90 degrees F, to prevent condensation. Control wiring shall be No. 14 stranded copper and shall be tested for one minute at twice line voltage plus 1000 vac. A neutral bus shall receive the neutrals of the control circuit, which shall be connected to ground. Wiring duct, with covers, shall be used to route wiring inside the control panel. Details shall be as shown on the contract drawings.

2.4.1.2 The enclosure shall be mounted on two vertical treated 6 inch by 6 inch posts embedded 3 feet-6 inches into ground. The enclosure shall be mounted centered at 4 feet-6 inches above finished grade.

2.4.1.3 Conduit entries into the enclosure shall be RGS conduit using Myers sealing type threaded conduit. Each conduit from the lift station to the control panel enclosure shall be equipped with an EYS sealing fitting suitable for Class I, Division 1 Hazardous locations. Each EYS fitting shall be installed with sealing compound, no more than 18 inches from the enclosure. The sealing fittings shall have minimum turning radius, large openings, threaded closures, and taper-tapped hubs.

2.4.2 Pump Motor Control Panel Enclosure. The pump motor control panel enclosure shall be NEMA 4X. A padlock with 6 keys shall be furnished by the Contractor.

2.4.3 Alarm Secondary Power. The Contractor shall install at each lift station a high level alarm system conforming to the requirements specified in 16400-2.6.2, as shown on the contract drawings.

2.4.4 Pump Motor Level Sensors. Four level sensors shall be furnished to control the operation of the pumps. Each level sensor shall consist of a glass-vial mercury switch housed within waterproof electrical control wiring from a support bracket on the lift station cover. The support bracket permits easy adjustment of the elevations of the float level sensors. Each control wire attached to a float level sensor shall have sufficient length to reach from the bottom of the wetwell sensor to the control panel without splices or junction boxes. When setting the level sensors at the specified elevations the excess float switch lead wire shall be coiled inside the lift station. The mercury float switches in the lift station level control circuits shall operate in a 120 vac control circuit.

### PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS. Grinder pump, lift station and accessories shall be installed at the locations shown on the drawings, as specified and in accordance with the manufacturer's recommendation.

3.2 EXECUTION AND BACKFILL. Excavation for and backfill around structures shall be as specified in SECTION 02221.

3.3 TESTS. Tests shall be performed as specified herein and to the satisfaction of the Government.

3.3.1. Field Test. The pumps shall be field tested in the presence of the manufacturer's representative and the Contracting Officer. The Contractor shall furnish the field test results to the Contracting Officer. The manufacturer's representative shall inspect the installation prior to the field test, and any defects shall be corrected by the Contractor. The capacity, head, and amperage shall be verified. Water for the pump station operating tests will be made available by the Government up to 4,000 gallons, with the existing water service line in the access area. If water usage exceeds 4,000 gallons, the Contractor shall furnish the additional water. Sufficient water shall be provided for operation in the full pumping range including alarm function and with each pump individually. Water may be non-potable, but shall be non-sewage in nature.

3.3.2 Factory Test. Before shipment, the equipment shall be tested for compliance with specification requirements and applicable safety standards.

3.4. WARRANTY. The Contractor shall furnish the manufacturer's standard warranty for all equipment provided under this section in accordance with Special Clause 00800-28. All work performed under this section shall conform to the requirements of Special Clause 00800-44 entitled "Warranty of Construction".

3.5. PARTS LIST AND INSTRUCTIONS. The Contractor shall furnish 5 sets of instructions and parts list for all equipment furnished under this section of the specifications. Information covering operation, maintenance, servicing, and dismantling the equipment shall be included.

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## SECTION 02730 - WASTEWATER COLLECTION SYSTEM

## PART 1 GENERAL

1.1 SCOPE. The work covered by this section of the specifications consists of furnishing all materials, labor, plant and equipment, and performing all operations for constructing the wastewater collection system complete as specified herein and as shown on the drawings.

## 1.2 QUALITY CONTROL.

1.2.1 General. The Contractor shall establish and maintain quality control for all operations to assure compliance with contract requirements and maintain records of quality control for all construction operations, including but not limited to the following:

- (1) Materials
- (2) Fabrication
- (3) Installation
- (4) Tests.

1.2.2 Reporting. A copy of these records and tests, as well as corrective action taken, shall be furnished to the Government daily.

1.3 APPLICABLE PUBLICATIONS. The following publications of issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto:

1.3.1 American Society for Testing and Materials (ASTM).

C 443-94	Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets
C 478-96	Pre-Cast Reinforced Concrete Manhole
D 1238-95	Flow Rates of Thermoplastics by Extrusion Plastometer
D 1248-84	Polyethylene Plastics Molding and
D 1693-97	Environmental Stress-Cracking of Ethylene Plastics
D 2321-89 (R 1995)	Underground Installation Of Thermoplastic Pipe for Sewers and Other Gravity-Flow

(R)

1.4 GENERAL. The gravity sewer system specified herein and shown on the drawings consists primarily of installing eight-inch sewer lines and new manholes.

1.4.1 Work covered by this section will not be accepted until backfilling connected with the work has been completed satisfactorily. Any section of sewer pipe that is found defective in material, alignment, grade,

or joints before acceptance shall be satisfactorily corrected by the Contractor at the Contractor's expense.

1.5 SUBMITTALS. Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted to the Contracting Officer in accordance with SECTION 01300 - SUBMITTAL PROCEDURES.

1.5.1 Drawings. Materials and Equipment; GA. Submit shop drawings of all work covered by this section of the specifications which requires fabrication. Where materials or equipment are standard stock products of manufacturers, full descriptive data shall be submitted, including catalog cuts and specifications. These shop drawings shall include as a minimum, drawings and catalog cuts for all piping and fittings.

## PART 2 PRODUCTS

2.1 MATERIALS. The following materials shall conform to the respective specifications and other requirements specified below.

2.1.1 High Density Polyethylene Plastic Pipe. High density polyethylene plastic pipe for the gravity sewer line shall conform to ASTM D 1248 Type III, Class C, Category 5, Grade P34. The material shall have a melt flow of less than 5.0 gms/10 min., as determined by ASTM D 1238, Condition F. The material shall exceed 1000 hours on Environmental Stress Crack Resistance as determined by ASTM D 1693, Condition C. The pipe shall be SDR 17; all fittings shall be SDR 11.

2.1.2 Precast Concrete Manholes. Precast manholes shall conform to ASTM C 478. Rubber gaskets shall conform to ASTM C 443.

2.1.3 Plastic Warning Tape. Plastic warning tape for the sewer line shall be acid and alkali-resistant polyethylene film, 6 inches wide minimum thickness of 0.004 inch. Tape shall have a minimum strength of 1750psi lengthwise and 1500 psi crosswise. The tape shall be manufactured with integral wires, foil backing or other means to enable detection by a metal detector when the tape is buried up to 4 feet deep. The tape shall be of a type specifically manufactured for marking and locating underground utilities. The metallic core of the tape shall be encased in a protective jacket or provided with other means to protect it from corrosion. Tape color shall be "Green" and shall bear a continuous printed inscription approximately 1-1/4 inches high stating "CAUTION - SEWER LINE BURIED BELOW".

## PART 3 EXECUTION

3.1. INSTALLATION. Installation of the gravity sewer system shall be in accordance with all applicable Federal, State and local regulations.

3.1.1 General. Excavation and backfilling of trenches shall conform to the applicable provisions of SECTION 02221. All gravity sewer pipes shall be laid to the depth and slopes as shown on the drawings. All gravity sewer lines shall be laid out well in advance of the time excavation is expected to begin and shall be checked by the Contracting Officer. Plastic HDPE pipe shall be protected during storage and installation from direct sunlight and excess heat. Any deformed or defective pipe shall be replaced by the Contractor at no additional cost to the Government. All pipe shall be assembled by a method approved by the Contracting Officer. Immediately after

laying, plastic pipe shall be covered leaving the joints exposed until after completion of the necessary tests.

3.1.2 Cutting of Pipe. Cutting of pipe shall be accomplished in a neat and workmanlike manner without damage to the pipe. Unless otherwise recommended by the manufacturer or authorized by the Contracting Officer, cutting shall be performed with an approved type mechanical cutter.

3.1.3 HDPE Installation. HDPE pipe shall be installed in accordance with ASTM D 2321. The pipe joints shall be thermalbutt fused as recommended by the manufacturer. Polyethylene pipe lengths, fittings, and flanged connections to be fused shall be the same grade, type, and class of polyethylene compound and shall be supplied by the same raw material supplier. Any one section of continuous fused pipe shall be limited in length as recommended by the pipe manufacturer to prevent damage to the joints or pipe during installation. As part of the cost to be included for installation of the high density polyethylene pipe, the Contractor shall provide for a field visit by the pipe manufacturer's authorized representative. The visit shall be coordinated with the butt fusing operation and pipe installation.

3.1.4 Cross Connections and Interconnections. Piping shall be installed to prevent a cross connection or interconnection between a distribution supply for drinking or domestic purposes and a polluted supply such as a waste pipe.

3.1.5 Separation and Crossings of Water Lines and Sewer Lines  
Requirements for horizontal and vertical separations shall be as specified in 02740-3.1.3.

3.1.6 Plastic Warning Tape. A continuous warning tape shall be installed approximately 12 inches below finished grade, directly above, and parallel to the buried sewer line.

3.1.7 Connection to Existing Structures. The Contractor shall connect the new 2-inch pressure sewer and new 8-inch gravity sewer discharge lines to the existing MH-A-10 and MH-A-13 respectively as shown on the drawings. Care shall be taken to prevent damage to the existing structures. Interior grouting and patching shall be accomplished as soon as possible after the new pipe has been inserted into structure and has been adequately supported to prevent movement. Any damage to the structures shall be repaired by the Contractor at no additional expense to the Government.

3.2 TESTS. The Contractor shall perform leakage tests on all completed sewer and drain lines. Tests shall be either by hydrostatic or air testing means as described herein and shall be performed in the presence of the Contracting Officer.

3.2.1 Hydrostatic Test. Gravity sewer lines shall be tested for leakage by either infiltration or exfiltration tests, as appropriate. Prior to testing for leakage the trench shall be backfilled up to at least the lower half of the pipe. If required, sufficient additional backfill shall be placed to prevent pipe movement during testing, leaving the joints uncovered to permit inspection. The requirement for the joints to remain exposed for the leakage tests may be waived by the Contracting Officer when one or more of the following conditions is encountered:

- (1) Wet or unstable soil conditions in the trench.

(2) Compliance would require maintaining barricades and walkways around and across an open trench in a heavily used area that would require continuous surveillance to assure safe conditions.

(3) Maintaining the trench in an open condition would delay completion of the contract.

(4) An unforeseeable cause which could result in excess cost.

The Contractor may request the waiver, setting forth in writing the reasons for the request and stating the alternative procedure proposed to comply with the required leakage test. Visible leaks encountered shall be corrected regardless of leakage test results. When the water table is two feet or more above the top of the pipe at the upper end of the pipe line section to be tested, infiltration shall be measured using a suitable weir or other device acceptable to the Contracting Officer. When the Contracting Officer determines that infiltration cannot be properly tested, an exfiltration test shall be made by filling the line to be tested with potable water so that a head of at least two feet is provided above both the water table and the top of the pipe at the upper end of the pipe line to be tested. The filled line shall be allowed to stand until the pipe has reached its maximum absorption, but not less than four hours. After absorption, the head shall be re-established. The amount of water required to maintain this water level during a two-hour test period shall be measured. Leakage as measured by either the infiltration tests or exfiltration tests shall not exceed 200 gallons per inch diameter per mile of pipe line per day. When leakage exceeds the maximum amount specified, satisfactory correction shall be made and retesting accomplished. Testing, correction, and retesting shall be made at no additional cost to the Government.

3.2.2 Air Test. If tests are made with air, a pressure of not less than 5 pounds per square inch shall be applied with a force pump and maintained at least 15 minutes without leakage. A mercury column gage shall be used in making the air test.

3.3 FLUSHING. All sewer lines shall be flushed, either prior to the tests or after, in accordance with 02740-3.1.8.

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02740.12

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## SECTION 02740 - WASTEWATER PRESSURE SEWER SYSTEM

## PART 1 GENERAL

1.1 SCOPE. The work covered by this section of the specifications consists of furnishing all materials, labor, plant and equipment, and performing all operations for constructing the wastewater pressure sewer system complete as specified herein and as shown on the drawings.

## 1.2 QUALITY CONTROL.

1.2.1 General. The Contractor shall establish and maintain quality control for all operations to assure compliance with contract requirements and maintain records of its quality control for all construction operations, including but not limited to the following:

- (1) Materials.
- (2) Fabrication.
- (3) Installation.
- (4) Tests.

1.2.2 Reporting. A copy of these records and tests, as well as the records of corrective action taken, shall be furnished to the Government daily.

1.3 APPLICABLE PUBLICATIONS. The following publications of the issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto:

1.3.1 American Society for Testing and Materials (ASTM).

D 1784-92	Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
D 2241-93	Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series)
D 3139-89	Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
F 477-93	Elastomeric Seals (Gaskets) for Joining Plastic Pipe

1.4 GENERAL. The wastewater pressure sewer system specified herein and shown on the drawings consists primarily of: (1) installation of a 2inch pressure sewer from the marina office building to existing MH-A-10. Work covered by this section will not be accepted until backfilling and testing connected with the work has been completed satisfactorily. Any section of sewer pipe that is found defective in material, alignment, grade, or joints, and any defects found in material and workmanship before acceptance, shall be satisfactorily corrected by the Contractor at no additional cost to the Government.

1.5 SUBMITTALS. Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted to the Contracting Officer in accordance with SECTION 01300 - SUBMITTAL PROCEDURES.

1.5.1 Drawings. Materials and Equipment; GA. Submit shop drawings of all work covered by this section of the specifications which requires fabrication. Where materials or equipment are standard stock products of manufacturers, full descriptive data shall be submitted, including catalog cuts and specifications.

## PART 2 MATERIALS

### 2.1 PIPE.

2.1.1 Polyvinyl Chloride (PVC) Pressure Sewer Pipe PVC pressure sewer pipe shall be SDR-26, 160 psi, conforming to ASTM D2241 and furnished in minimum lengths of 20 feet. The PVC pipe shall be manufactured of materials conforming to ASTM D 1784, Type I, Grade 1254 B designated as PVC 1120.

2.2 RUBBER RINGS. Rubber Rings for bell-and-spigot as recommended by the manufacturer of the pipe. Gaskets and joints shall conform to the requirements of ASTM D 3139 and ASTM F 477.

2.3 PLASTIC WARNING TAPE. Plastic warning tape for the pressure sewer system shall be acid and alkali-resistant polyethylene film, 6 inches wide minimum thickness of 0.004 inch. Tape shall have a minimum strength of 1750 psi lengthwise and 1500 psi crosswise. The tape shall be manufactured with integral wires, foil backing or other means of enabling detection by a metal detector when the tape is buried at a depth of 3 feet. The tape shall be of a type specifically manufactured for marking and locating underground utilities. The metallic core of the tape shall be encased in a protective jacket or provided with other means to protect it from corrosion. Tape color shall be green for sewer line, and shall bear a continuous printed inscription describing the specific utility.

## PART 3 EXECUTION

### 3.1 PIPE INSTALLATION.

3.1.1 PVC SDR 26 Pipe. Excavation and backfilling of trenches shall conform to the applicable provisions of SECTION 02221 - EXCAVATION, TRENCHING, AND BACKFILLING FOR WASTEWATER COLLECTION SYSTEM. Sewer lines shall be installed to the slopes and elevations as shown on the drawings. Plastic PVC pipe shall be protected during storage and installation from direct sunlight and excess heat. Any deformed or defective pipe shall be replaced by the Contractor at no additional cost to the Government. All piping shall be assembled by a method approved by the Contracting Officer. Immediately after laying, plastic PVC pipe shall be covered leaving the joints exposed until after completion of the necessary tests.

3.1.1.1 Cutting of Pipe. Cutting of pipe shall be accomplished in a neat and workmanlike manner without damage to the pipe. Unless otherwise recommended by the manufacturer or authorized by the Contracting Officer, cutting shall be performed with an approved type mechanical cutter.

3.1.1.2 Jointing of PVC Pipe. Jointing PVC pipe shall be accomplished as specified by the manufacturer and/or as follows:

(1) Clean spigot ends, grooves, and gaskets of all dirt and foreign materials, paying particular attention to the gasket groove.

(2) Set the gasket in the groove making sure the gasket is not twisted or turned to prevent proper seating.

(3) Lubricate the plain end of the pipe and gasket with lubricant as recommended by the manufacturer of the pipe.

(4) Push the plain end into the bell or coupling so that the mark on the plain end is in line with the end of the bell or coupling.

3.1.2 Cross Connections and Interconnections Piping shall be installed in a manner that will prevent a cross connection or interconnection between a distribution supply for drinking or domestic purposes and a polluted supply such as a waste pipe.

### 3.1.3 Separation and Crossing of Water Lines and Sewer Lines

#### 3.1.3.1 Horizontal Separation.

3.1.3.1.1 Whenever possible, the proposed sewer line shall be laid at least 10 feet horizontally from any existing water line.

3.1.3.1.2 Should local conditions prevail which would prevent a lateral separation of 10 feet, a sewer line may be laid closer than 10 feet to a water line provided the line is laid in a separate trench or on an undisturbed earth shelf located to one side of the water line and at such an elevation that the bottom of the water line is at least 18 inches above the top of the sewer.

#### 3.1.3.2 Vertical Separation.

3.1.3.2.1 Whenever the proposed sewer line crosses an existing water line the sewer line shall be laid at such an elevation that the bottom of the sewer line is a minimum of 18 inches above the top of the existing water line.

This vertical separation shall be maintained for that portion of the water lines located within 10 feet, horizontally, of the sewer or drain crossing, said 10 feet to be measured as the normal distance from the water line to the drain, or sewer.

3.1.3.2.2 Where conditions exist that the proper horizontal and vertical separation set forth in 02740-3.1.3.1 or 02740-3.1.3.2 are unable to be maintained, or it is necessary for the water line to pass under a sewer or drain, the water and sewer lines shall be constructed of cement-mortar-lined ductile iron pipe, and the pipes shall extend on each side of the crossing until the normal distance from the water line to the sewer is at least 10 feet. In making such a crossing, a length of water pipe shall be centered over the sewer to be crossed so that the joints will be equidistant from the sewer and as remote therefrom as possible. Where a water line must cross under a sewer line, a vertical separation of 18 inches between the bottom of the sewer and the top of the water line shall be maintained along with means to support the larger-sized sewer to prevent their settling and breaking the water line.

3.1.4 Plastic Warning Tape. Plastic warning tape shall be installed approximately 1 foot below finished grade directly above and parallel to the pipe.

3.1.5 Thrust Blocks. Plugs, caps, tees and bends deflecting 22 1/2 degrees or more, either vertically or horizontally, on pressure sewers shall be provided with thrust blocking. Thrust blocks shall be constructed of concrete and as shown on the drawings. Blocking shall be placed between solid ground and the fitting to be anchored. Unless otherwise indicated or directed, the base and thrust bearing sides of thrust blocks shall be poured directly against undisturbed earth. The sides of thrust blocks not subject to thrust may be poured against forms. The area bearing shall be as shown or as directed. Blocking shall be placed so that the fitting joints will be accessible for repair.

3.1.6 Connection to Existing Structures. The Contractor shall connect the new 2-inch pressure sewer discharge lines to the existing MH-A-10 as shown on the drawings. Care shall be taken to prevent damage to the existing structures. Interior grouting and patching shall be accomplished as soon as possible after the new pipe has been inserted into structure and has been adequately supported to prevent movement. Any damage to the structures shall be repaired by the Contractor at no additional expense to the Government.

3.1.7 Hydrostatic Tests. All portions of the sewer line shall be hydrostatically tested. All hydrostatic tests shall be performed in the presence of the Contracting Officer. Where any section of sewer line is provided with concrete thrust blocking for fittings, the hydrostatic tests shall not be made until at least 5 days after installation of the concrete thrust blocking unless otherwise approved. Water may be nonpotable, but must be non-sewage in nature.

3.1.7.1 Pressure Tests. After the pipe is laid, the joints completed, and the trench partially backfilled leaving the joints exposed for examination, the newly laid piping or anyvalved section shall be subjected for one hour to hydrostatic pressure test of 75 pounds per square inch. Each valve shall be opened and closed several times during the test. Exposed pipe, joints fittings and valves shall be carefully examined during the partially open trench test. Joints showing visible leakage shall be replaced or remade as necessary. Cracked or defective pipe, joints, fittings or valves discovered in consequence of this pressure test shall be removed and replaced with sound material, and the test shall be repeated until the test results are satisfactory. The requirement for the joints to remain exposed for the hydrostatic tests may be waived by the Contracting Officer when one or more of the following conditions are encountered:

- (1) Wet or unstable soil conditions in the trench.
- (2) Compliance would require maintaining barricades and walkways around and across an open trench in a heavily used area that would require conditions surveillance to assure safe conditions.
- (3) Maintaining the trench in an open condition would delay completion of the contract.
- (4) An unforeseeable cause which would result in excess cost. The Contractor may request the waiver, setting forth in writing the reasons for the request and stating the alternative procedure proposed to comply with the required hydrostatic tests.

3.1.7.2 Leakage Tests. Leakage tests shall be conducted after the pressure test has been satisfactorily completed. The duration of each leakage test shall be at least 2 hours, and during the test the sewer line shall be subjected to 150 lbs. psi pressure. Leakage is defined as the quantity of

water to be supplied into the newly laid pipe, or anyvalved or approved section thereof, necessary to maintain the specified leakage test pressure after the pipe has been filled with water and the air expelled. No piping installation will be accepted until the leakage is less than 0.012 gallons per hour per joint.

3.1.7.3 Time for Conducting Test. Except for joint material setting or where concrete thrust blocking necessitates a 5-day delay, pipelines jointed with rubber gasket, mechanical or push-on joints, or couplings may be subject to hydrostatic pressure, inspected, and tested for leakage at any time after partial completion of backfill. To avoid keeping trenches open until all the sewer line is laid, the Contractor may lay approximately 300 feet of sewer line, test this equipment, complete backfill and proceed with installing the next segment.

3.1.7.4 Concurrent Hydrostatic Tests. The Contractor may elect to conduct the hydrostatic tests concurrently. If concurrent testing is employed the results of pressure tests and leakage tests shall be satisfactory as specified in 02740-3.1.7.1 and 02740-3.1.7.2 above. All replacement, repair, or retesting required shall be accomplished by the Contractor at no additional cost to the Government.

3.1.8 Flushing. All sewer lines shall be flushed, either prior to the tests or after, with minimum velocity of 2.5 feet/second or as authorized by the Contracting Officer.

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SECTION 02840  
GUARDRAIL AND ACCESS CONTROL GATE

## PART 1 - GENERAL

1.1 SCOPE. The work covered by this section of the specifications consists of furnishing all plant, labor, equipment and materials, and performing all work necessary to complete the guardrail as shown on the drawings and specified herein.

## 1.2 QUALITY CONTROL.

1.2.1 General. The Contractor shall establish and maintain quality control for all operations to assure compliance with contract requirements and maintain records of quality control for all construction operations, including but not limited to the following:

- (1) Materials
- (2) Installation.

1.2.2 Reporting. A copy of these records and tests, as well as the records of corrective action taken, shall be furnished to the Government daily.

1.3 APPLICABLE PUBLICATIONS. The following publications of the issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the reference thereto:

1.3.1 Illinois Standard Specifications. The material for, and construction of guardrail shall conform to the applicable provisions of the hereinafter cited sections and, as specified, Articles of the State of Illinois, Illinois Department of Transportation (IDOT), "Standard Specifications for Road and Bridge Construction", adopted July 1, 1994. The term "Engineer" as used therein shall be interpreted to mean the "Contracting Officer".

1.4 SUBMITTALS. Government approval is required for all submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01300 - SUBMITTAL PROCEDURES:

1.4.1 Drawings. (1) Guardrail; FIO. Submit details of guardrail for approval.

(2) Access Gate; GA. Submit shop drawings and details of access gate for approval.

## PART 2 - PRODUCTS

2.1 GUARDRAIL. Guardrail materials shall be in accordance with SECTION 630, STEEL PLATE BEAM GUARDRAIL, excluding Articles 630.07 and 630.08. Guardrail shall be Type TP-1 Combination Steel Railing. Posts shall be steel. A copy of the STANDARD is included at the end of this Section.

2.2 ACCESS CONTROL GATE. The gate furnished under this contract shall be galvanized and shall be the product of a manufacturer regularly engaged in the manufacture of gates. All pipes for the gate framework shall be of ¼ inch

wall thickness and shall be straight and true to the dimensions shown on the drawings. Welded members shall be in correct alignment as shown on the drawings and shall be clean and ground to a smooth surface. Regardless of welding method, welds shall not show any cracks or signs of incomplete fusion.

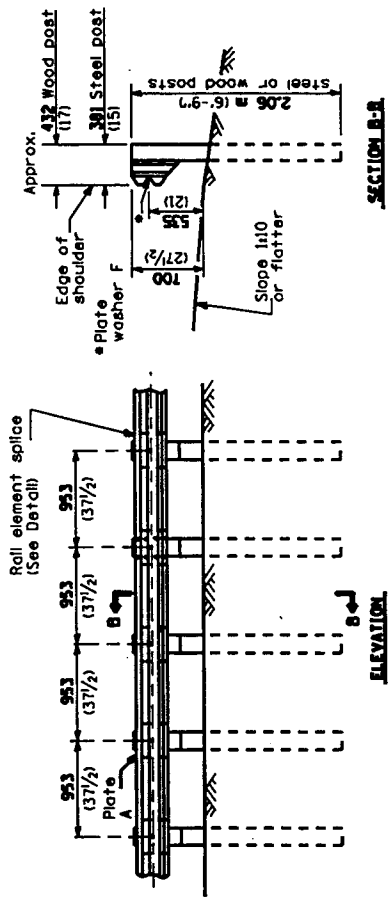
Welds found by visual inspection to have any defects will not be acceptable and shall be corrected by the Contractor at no additional cost to the Government. All welding repairs shall be in accordance to ASTM A 780-93.

### PART 3 - EXECUTION

3.1 GUARDRAIL. Guardrail installation shall be in accordance with SECTION 630, STEEL PLATE BEAM GUARDRAIL.

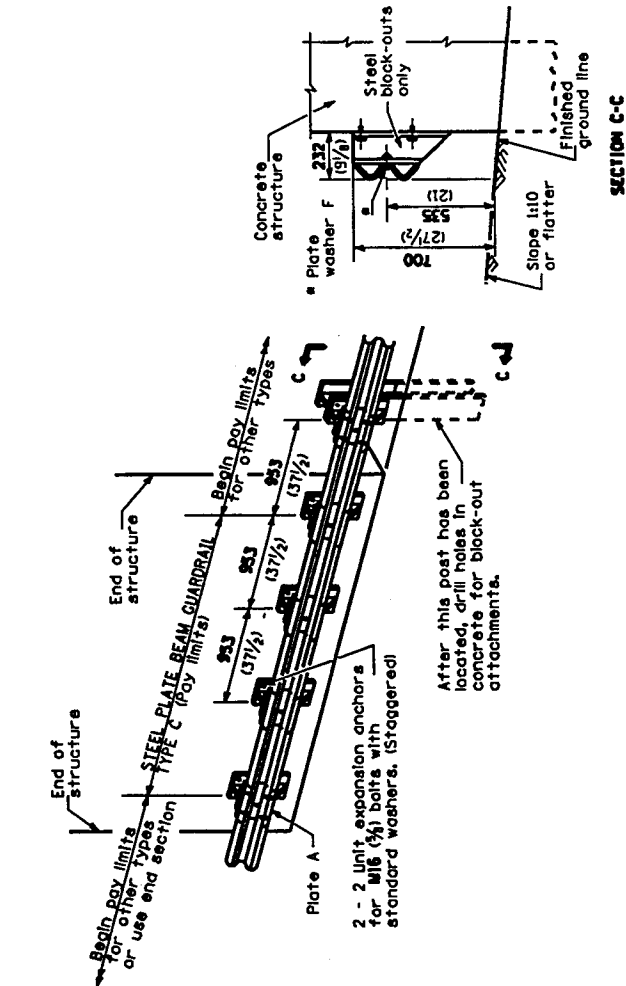
3.2 ACCESS CONTROL GATE. The gates shall be completely constructed, positioned in the footing holes, and adjusted in the closed and open position in accordance with the details before the concrete footings are poured. All metal parts shall be painted and primed according to the manufacturer's recommendation. Painting shall be in accordance with SECTION 09900 - PAINTING. All concrete that is splattered on any gate member shall be removed prior to the painting.

\* \* \* \* \*



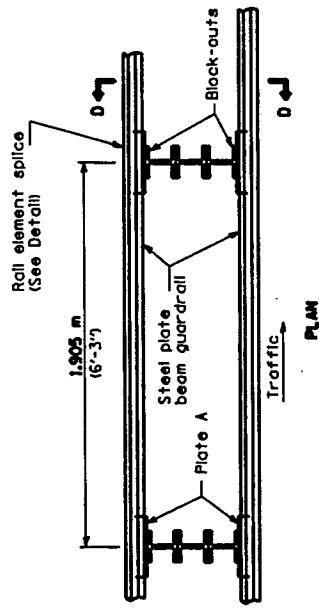
## TYPE A

**1.905 m (6'-3") Typical post spacing**



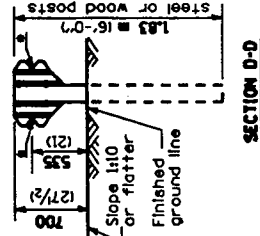
### TYPE C

**953 (37½) Block-out spacing**



**TYPE D**

Double steel plate beam guardrail  
1.905 m (6'-3") typical post spacing



## GENERAL NOTE

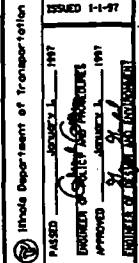
All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).  
All dimensions are in millimeters (inches) unless otherwise shown.

DATE	REVISIONS
1-1-97	Renum, Standard 2230-18.
	Added opt. wood black-
	out details & notes.
2-1-95	Removed plate washer F
	from Type A.

**STEEL PLATE BEAM  
GUARDRAIL**

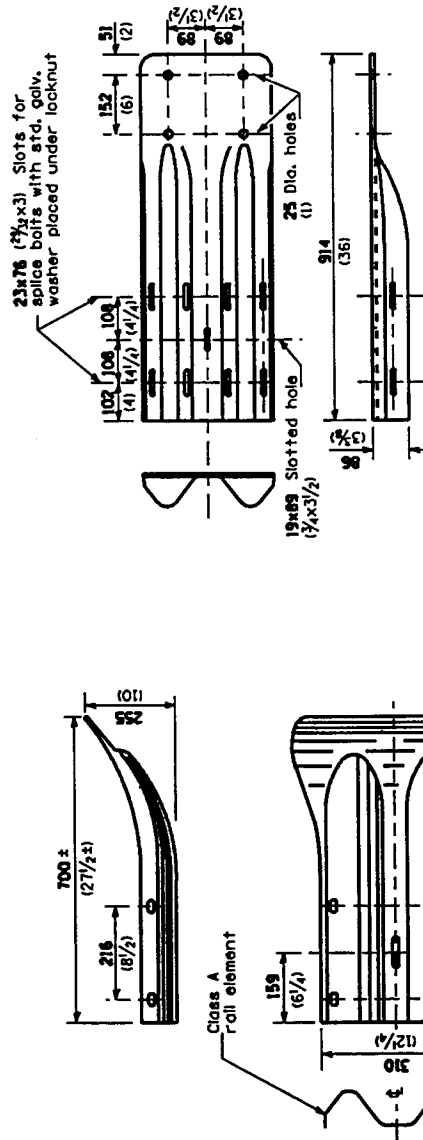
(Sheet 1 of 4)

**STANDARD 630001**

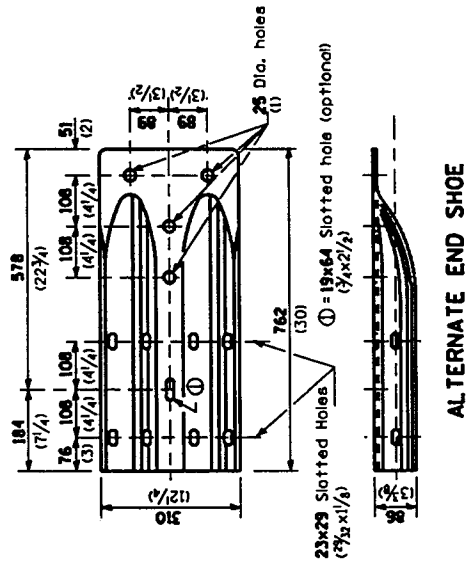




## RAIL ELEMENT SPLICE



**END SECTION**



**ALTERNATE END SHOE**

**NOTE**

When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guardrail movement.

The standard end shoe shall be attached to the concrete with pre-drilled or self-drilling anchor bolts. The anchor cone shall be set flush with the surface of the concrete.


Externally threaded studs protruding from the surface of the concrete will not be permitted.

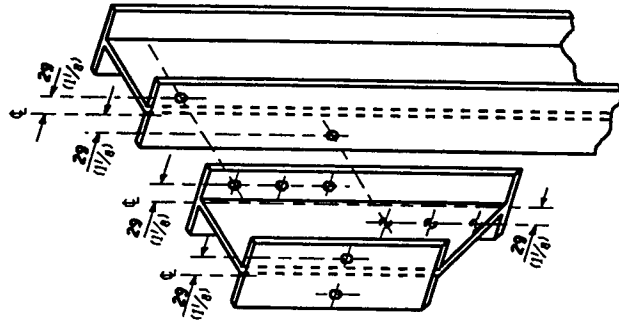
All dimensions are in millimeters (inches) unless otherwise shown.

# STEEL PLATE BEAM GUARDRAIL

(Sheet 3 of 4)

**STANDARD 6300001**


**Florida Department of Transportation**  
 PASSED \_\_\_\_\_ JANUARY 1, 1997  
 ENGINEER OF SAFETY INSPECTIONS  
 APPROVED \_\_\_\_\_ JANUARY 1, 1997  
 ENGINEER OF TRAFFIC AND TRANSPORTATION



STANDARD 6300001



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SECTION 02935  
ESTABLISHMENT OF TURF

## PART 1 - GENERAL

1.1 SCOPE. The work covered by this section consists of furnishing all plant, labor, equipment and materials, and performing all operations in connection with the seeding, fertilizing, mulching and watering of the areas as specified herein and as shown on the drawings.

## 1.2 QUALITY CONTROL.

1.2.1 General. The Contractor shall establish and maintain quality control for all operations to assure compliance with contract requirements and maintain records of quality control for all construction operations, including but not limited to the following:

- (1) Preparation of ground surface.
- (2) Fertilizing.
- (3) Mulching.
- (4) Watering.

1.2.2 Reporting. A copy of these records and tests, as well as corrective action taken, shall be furnished to the Government daily.

1.3 AREAS TO BE TREATED. Turf shall be established on all exposed newly constructed cut or fill areas not otherwise covered by other material. Also, existing turfed areas used as haul road locations shall be reestablished with turf.

1.4 SUBMITTALS. Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01300 - SUBMITTAL PROCEDURES.

1.4.1 Soil Test Results. GA. Submit soil results and fertilizer application rates.

## PART 2 - PRODUCTS

2.1 SEED. Seed shall be furnished separately or in mixtures in standard containers with the seed name, lot number, net weight, percentages of purity and of germination and hard seed, and percentage of maximum weed seed content clearly marked for each kind of seed. Wet, moldy or otherwise damaged seed will not be acceptable. Seed shall conform to the following mixture:

<u>Type of Seed</u>	<u>Pounds per Acre</u>
Turf Type, Tall Fescue Festuca arundinacea SPP	198
Hybrid Bluegrass Poapratensis	22

2.2 FERTILIZER. Fertilizer shall be standard commercial fertilizers supplied separately or in mixtures containing the percentages of total nitrogen, available phosphoric acid, and water-soluble potash. Fertilizers shall be standard commercial fertilizers supplied separately or in mixtures containing the following percentages of 10% total nitrogen, 30% available phosphoric acid, and 10% water soluble potash. They shall be applied at a rate of 100 pounds of actual nutrients per acre and to a minimum depth of 3 inches.

2.3 WATER. Water shall be free from oil, acid, alkali, salt. The source of the water shall be approved prior to use.

2.4 MULCH. Acceptable mulch shall be the materials listed below or any approved locally available material that is similar to those specified. Low grade, musty, spoiled, partially rotted hay, straw, or other materials unfit for animal consumption will be acceptable. Mulch materials, which contain matured seed of species which would volunteer and be detrimental to the proposed overseeding will not be acceptable. Straw or other mulch material which is in such an advanced stage of decomposition as to smother or retard the planted grass, will not be acceptable.

(1) Hay. Hay shall be native hay, sudan grass hay, broomsedge hay, legume hay, or similar hay or grass clippings.

(2) Straw. Straw shall be the threshed plant residue of oats, wheat, barley, rye, or rice from which grain has been removed.

(3) Hay Mulch Containing Seed. Hay mulch shall be mature hay containing viable seed of native grasses or other desirable species as approved by the Contracting Officer.

(4) Manufactured Mulch. Cellulose-fiber or wood-pulp mulch shall be products commercially available for use in spray conditions.

2.5 EROSION CONTROL BLANKET. Erosion control blankets shall meet the material requirements of Illinois Department of Transportation "Standard Specifications for Road and Bridge Construction" Adopted July 1, 1994, SECTION 781. MATERIALS FOR PLANTING, Article 781.10 "Special Erosion Control Materials" for (a) Excelsior Blanket or (b) Knitted Straw Mat.

### PART 3 - EXECUTION

3.1 COMMENCEMENT, PROSECUTION AND COMPLETION. Seeding operations shall be performed between 15 March and 15 May or between 15 August and 30 September. Seed, fertilizer and mulch shall be applied at the specified rates in accordance with standard horticultural practices for establishing new turf.

3.1.1 Time Extension. When all work under this contract is completed, except work required under this section, and such work is not performed because of seasonal limitations stated in paragraph 3.1 above, or because of conditions occurring within the specified seeding seasons which, in the opinion of the Contracting Officer, are unfavorable for such work, the time for completion will be extended by the number of days that this work is thereby delayed.

### 3.2 CONSTRUCTION METHODS.

3.2.1 Advance Preparation. After grading of areas has been completed and before applying fertilizer, areas to be seeded shall be raked or otherwise cleared of stones larger than 2 inches in any diameter, sticks, stumps, and other debris which might interfere with sowing of seed, growth of grasses, or subsequent maintenance of grass-covered areas. If any damage by erosion or other causes has occurred after the completion of grading and before beginning the application of fertilizer, the Contractor shall repair such damage. This includes filling gullies, smoothing irregularities, and repairing other incidental damage. This work shall be incidental to this item. An area to be seeded shall be considered a satisfactory seedbed without additional treatment if it has recently been thoroughly loosened and worked to a depth of not less than 5 inches as a result of grading operations and, if immediately prior to seeding, the top 3 inches of soil is loose, friable, reasonably free from large clods, rocks, large roots, or other undesirable matter, and if shaped to the required grade. However, when the area to be seeded is sparsely soddied, weedy, barren and unworked, or packed and hard, any grass and weeds shall first be cut or otherwise satisfactorily disposed of, and the soil then scarified or otherwise loosened to a depth not less than 5 inches. Clods shall be broken and the top 3 inches of soil shall be worked into a satisfactory seedbed by disking, or by use of cultipackers, rollers, drags, harrows, or other appropriate means.

3.2.2 Fertilizing. Following the advance preparation and cleanup fertilizer shall be uniformly spread at the rate which will provide not less than the minimum quantity stated above.

3.2.3 Seeding. Grass seed shall be sown at the rate specified above immediately after fertilizing, and the fertilizer and seed shall be raked to cover the seed with approximately 1/4 inch of soil.

3.2.4 Mulching. Mulch material shall be furnished, hauled, and evenly applied on the seeded areas. Straw or hay shall be spread over the surface to a uniform thickness at the rate of 2 to 3 tons per acre to provide a loose depth of not less than 1-1/2 inches nor more than 3 inches. The mulch shall be held in place by light disking, a very thin covering of topsoil, pins, stakes, wire mesh, asphalt binder, or other adhesive material approved by the Contracting Officer.

3.2.5 Erosion Control Blanket. On all areas to be seeded equal to or greater than 4 horizontal to 1 vertical in slope erosion control blankets shall be used as a protective cover for the freshly seeded areas in lieu of mulching. The erosion control blankets shall be placed on the previously approved seeded area within 24 hours of the seeding operations. The blankets shall be placed so that the netting is on top and the blanket fibers are in contact with the soil. The blankets shall be applied either horizontally or vertically to the contour and stapled in place using staples spaced not more than 6 feet apart along both sides of the blanket. All blanket seams shall overlap at least 2 inches. Six staples shall be installed across the ends of each roll.

3.3 INSPECTION AND ACCEPTANCE. Acceptance of seeded and mulched areas and areas seeded and covered by erosion control blankets shall be based upon establishment of a dense, well-rooted turf, capable of preventing all erosion. Grass areas which show signs of erosion, ruts or bare spots that exceed 1 square foot in size or exceed 3 percent of the area to be seeded will not be acceptable.

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SECTION 03300  
CONCRETE AND FORMWORK

PART 1 GENERAL

1.1 SCOPE. The work covered by this section consists of furnishing all plant, labor, materials and equipment for the manufacture, transporting, placing, finishing and curing of concrete and other items as specified herein.

1.2 REFERENCES. The following issues of the publications listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto:

1.2.1 American Society for Testing and Materials (ASTM).

A 185-94	Steel Welded Wire Fabric, Plain, for Concrete Reinforcement
A 615/A 615M-96	Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
C 31-91	Making and Curing Concrete Test Specimens in the Field.
C 33-93	Concrete Aggregates
C 39-93 (Rev. A)	Compressive Strength of Cylindrical Concrete Specimens.
C 94-94	Ready-Mixed Concrete
C 143-90 (Rev. A)	Slump of Hydraulic Cement Concrete
C 150-94	Portland Cement
C 172-90	Sampling Freshly Mixed Concrete
C 231-91 (Rev. B)	Air Content of Freshly Mixed Concrete by the Pressure Method
C 260-86	Air-Entraining Admixtures for Concrete
C 309-93	Liquid Membrane-Forming Compounds for Curing Concrete
C 494-92	Chemical Admixtures for Concrete
C 920-95	Elastomeric Joint Sealants
C 1107-91 (REV A)	Packaged Dry, Hydraulic Cement Grout (Nonshrink)
D 1751-83 (R 1991)	Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Type)

1.2.2 Concrete Plant Manufacturer's Bureau (CPMB).

1.2.3 Department of Commerce (DOC).

DOC PS 1-83

Construction and Industrial Plywood

## 1.3 QUALITY CONTROL.

1.3.1 Concrete Testing.

1.3.1.1 Cylinder Tests. The Contractor shall make a set of three cylinders for each shift concrete is placed; one cylinder shall be tested at seven days and two cylinders tested at twenty-eight days. Concrete shall be sampled in accordance with ASTM D 172. Compression test specimens shall be made and cured in accordance with ASTM C 31, and tested in accordance with ASTM C 39. The strength of the concrete will be considered satisfactory so long as the average of all sets of three consecutive tests results equals or exceeds the required specified strength  $f'_c$  and no individual test (average of two cylinders) results falls below the specified strength  $f'_c$  by more than 500 pounds per square inch. Additional analysis or testing may be required at the Contractor's expense when the strength of the concrete in the structure is considered potentially deficient.

1.3.1.2 Slump Tests. The Contractor shall perform a minimum of two slump tests, in accordance with ASTM C 143, for each shift concrete is placed.

1.3.1.3 Air Content Tests. The Contractor shall perform a minimum of two air content tests, in accordance with ASTM C 231, for each shift concrete is placed.

1.3.1.4 Construction Testing by Government. The Government may sample and test aggregates and concrete to determine compliance with the specifications. The Contractor shall provide facilities and labor as may be necessary for procurement of representative test samples.

1.3.2 Appearance. Permanently exposed surfaces shall be cleaned, if stained or otherwise discolored, by a method that does not harm the concrete and that is approved by the Contracting Officer.

1.4 SUBMITTALS. Government approval is required for all submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01300 SUBMITTAL PROCEDURES:

1.4.1 Data. Nonshrink Grout; GA. Submit descriptive literature of the grout proposed for use.

1.4.2 Statements.

(1) Proportions; GA. Submit the proportions of all ingredients and nominal maximum coarse aggregate size that will be used in the manufacture of concrete. Proportions shall indicate the weight of cement, and water; the weights of aggregates in a saturated surface-dry condition; and the quantities of admixtures.

(2) Conveying Equipment; FIO. Submit the methods and equipment for transporting, handling, and depositing the concrete in accordance with paragraph CONVEYING EQUIPMENT.

(3) Placing; FIO. Submit methods and equipment for placing concrete.

(4) Joint Cleanup; FIO. Submit methods and equipment proposed for joint cleanup and waste disposal.

(5) Curing; FIO. Submit the curing medium and methods proposed for use.

(6) Cold-Weather Placing; GA. If concrete is to be placed under cold-weather conditions, submit the proposed materials, methods, and protection meeting the requirements of paragraph 3.2.3.

(7) Hot-Weather Placing; GA. If concrete is to be placed under hot-weather conditions, submit the proposed materials, methods, and protection meeting the requirements of paragraph 3.2.4.

#### 1.4.3 Test Reports.

(1) Concrete Mixture Proportions; GA. Submit test reports from a laboratory complying with ASTM C 1077 which show that proportions selected will produce concrete of the qualities specified. No substitution shall be made in the source or type of materials used in the work without additional tests to show that the new materials and quality of concrete are satisfactory.

(2) Prepackaged Nonshrink Grout; GA. Material requiring only the addition of water will be accepted on the basis of certified laboratory test results showing that the material meets the requirements of ASTM C 1107. When fine aggregate is to be added, the Contractor shall also furnish for approval the design mix proportions together with certified copies of laboratory test results indicating that the mix is in conformance with the requirements of ASTM C 1107.

(3) Cylinder Tests; FIO. Submit the results of the concrete cylinder tests.

(4) Slump Testing; FIO. Submit the results of slump tests.

(5) Air Content Testing; FIO. Submit the results of the air content tests.

#### 1.4.4 Certificates.

(1) Cement; FIO. Submit manufacturer's certification of compliance, accompanied by mill test reports, that cement materials meet the specified requirements.

(2) Nonshrink Grout; FIO. Submit certificate from the manufacturer stating that the grout is suitable for the application or exposure for which it is proposed for use.

(3) Air-Entraining Admixture; FIO. Submit manufacturer's certificate stating that materials comply with specified requirements.

(4) Other Chemical Admixtures; FIO. Submit manufacturer's certificate stating that materials comply with specified requirements.

(5) Curing Compound; FIO. Submit manufacturer's certificate stating that materials comply with specified requirements.

(6) Joint Material; FIO. Submit manufacturer's certificate stating that materials comply with specified requirements.

(7) Reinforcement; FIO. Submit manufacturer's certificate stating that materials comply with specified requirements.

(8) Forming accessories; FIO. Submit manufacturer's certificate stating that materials comply with specified requirements.

## PART 2 PRODUCTS

### 2.1 MATERIALS.

2.1.1 Cementitious Materials. Cementitious materials shall be portland cement, and shall conform to ASTM C 150, Type I.

2.1.2 Aggregates. Fine and coarse aggregates shall conform to the grading and quality requirements of ASTM C 33. The nominal maximum size shall be as specified in paragraph 2.2.2. The coarse aggregate shall be limestone.

2.1.3 Chemical Admixtures. When required or permitted, chemical admixtures shall conform to the appropriate specification listed below:

2.1.3.1 Air-Entraining Admixture. ASTM C 260.

2.1.3.2 Water-Reducing or Retarding Admixtures ASTM C 494, Type A, B, or D.

2.1.4 Curing Materials.

2.1.4.1 Membrane-Forming Curing Compound ASTM C 309, Type 1-D.

2.1.5 Water. Water for mixing and curing shall be fresh, clean, and free of injurious amounts of oil, acid, salt, or alkali

2.1.6 Nonshrink Grout. Nonshrink grout shall conform to ASTM C 1107 and shall be a commercial formulation suitable for the application proposed.

2.1.8 Forms. Forms shall be new (single use only) plywood panels conforming to DOC PS 1, concrete form panels, Class I, Grade BB Plyform, High Density Overlay, Exterior Type or Structural I, Grade B-B Plyform, High Density Overlay, all Exterior Type.

2.1.9 Premolded Joint Filler. Premolded joint filler shall conform to ASTM D 1751.

2.1.10 Joint Sealer. Joint sealer shall conform to ASTM C 920 Type S or M, Grade P, Class 25.

2.1.11 Deformed Reinforcing Bars. Reinforcing bars shall conform to ASTM A 615, Grade 60 unless otherwise indicated.

2.1.12 Welded Wire Fabric. Shall be plain welded cold drawn steel wire fabric, conforming to ASTM A 185. Furnish in flat sheets, not rolled.

2.1.13 Accessories.

2.1.13.1 Bar Supports. Bar supports shall comply with the requirements of ACI 315. Supports for bars in concrete with formed surfaces exposed to view or to be painted shall be plastic-coated wire or stainless steel.

2.1.13.2 Wire Ties. Wire ties shall be 16-gage or heavier black

annealed wire.

## 2.2 MIXTURE PROPORTIONING.

2.2.1 Quality and Location. Mixture proportions shall be selected so that the following strength and water-cement ratio requirements are met:

2.2.1.1 Strength. Specified compressive strength  $f'_c$  shall be 4000 psi at 28 days.

2.2.1.2 Maximum Water-Cement Ratio. Maximum water-cement ratio shall be 0.45 by weight.

2.2.2 Nominal Maximum-Size Coarse Aggregate shall be 1-inch.

2.2.3 Air Content as determined by ASTM C 231 shall be between 6 percent with an operating tolerance of 1.5 percent.

2.2.4 Slump. The slump shall be determined in accordance with ASTM C 143 and shall be within the range of 1 to 4 inches. Where placement by pump is approved, the slump shall not exceed 6 inches and shall remain within a 3-inch band.

2.3 PRODUCTION EQUIPMENT. The batching and mixing equipment shall have a capacity sufficient to prevent cold joints. The batching plant shall conform to the requirements of the Concrete Plant Standards of CPMB and as specified; however, rating plates attached to batch plant equipment are not required. Ready mix concrete may be used.

2.4 CONVEYING EQUIPMENT. The conveying equipment shall have a capacity to prevent formation of cold joints. Concrete shall be conveyed from mixer to forms as rapidly as practicable and within the time interval in paragraph 3.2.2 by methods that will prevent segregation or loss of ingredients.

## PART 3 EXECUTION

### 3.1 PREPARATION FOR PLACING.

3.1.1 Embedded Items. Before placement of concrete, care shall be taken to determine that all embedded items are firmly and securely fastened in place as indicated on the drawings, or required. Embedded items shall be free of oil and other foreign matter such as loose coatings or rust, paint, and scale. The embedding of wood in concrete will be permitted only when specifically authorized or directed.

3.1.2 Concrete Placed Against Existing Concrete Existing concrete upon which concrete is to be placed shall be clean, free from oil, standing or running water, ice, mud, drummy concrete, coating, debris, and loose, semidetached or unsound fragments. All surfaces shall be cleaned thoroughly as defined in paragraph 3.1.3.2.

#### 3.1.3 Construction Joint Treatment.

3.1.3.1 General. Concrete surfaces to which other concrete is to be bonded shall be prepared by cleaning with high-pressure water jet, or other approved method.

#### 3.1.3.2 Cleaning.

3.1.3.2.1 High-Pressure Water Jet. A stream of water under a pressure of not less than 3,000 pounds per square inch may be used for cleaning. Where the cleaning occurs more than 2 days prior to placing the next lift or where

work in the area subsequent to the cleaning causes dirt or debris to be deposited on the surface, the surface shall be cleaned again as the last operation prior to placing.

3.1.3.2.2 Waste Disposal. The method used in disposing of waste water employed in cutting, washing, and rinsing of concrete surfaces shall be such that the waste water does not stain, discolor, or affect exposed surfaces of the structures, or damage the environment of the project area. The method of disposal shall be subject to approval of the Contracting Officer.

3.1.4 Formwork. Construct so that concrete members and structures are of correct size, shape, alignment, elevation and position. Accurately place and securely support items built into forms. Forms for exposed surfaces shall be coated with nonstaining form oil, which shall be applied immediately prior to placing concrete. Forms shall not be removed without approval. All form removals shall be accomplished in such a manner as to prevent injury to the concrete. Forms shall not be removed before the expiration of the minimum of 48 hours time except where otherwise specifically authorized. When conditions on the work are such as to justify the requirement, forms will be required to remain in place for longer periods.

### 3.2 CONCRETE PLACEMENT.

3.2.1 General. Concrete placement will not be permitted when, in the opinion of the Contracting Officer, weather conditions prevent proper placement and consolidation. Concrete shall be deposited as close as possible to its final position in the forms and, in so depositing, there shall be no vertical drop greater than 5 feet except where suitable equipment is provided to prevent segregation and where specifically authorized. Depositing of the concrete shall be so regulated that it may be effectively consolidated with a minimum of lateral movement. The amount deposited in each location shall be that which can be readily and thoroughly consolidated. Sufficient placing capacity shall be provided so that concrete placement can be kept plastic and free of cold joints while concrete is being placed.

3.2.2 Time Interval Between Mixing and Placing Concrete shall be placed within 30 minutes after discharge into nonagitating equipment. When concrete is truck mixed or when a truck mixer or agitator is used for transporting concrete mixed by a concrete plant mixer, the concrete shall be delivered to the site of the work, and discharge shall be completed within 1-1/2 hours after introduction of the cement to the aggregates. When the length of haul makes it impossible to deliver truck-mixed concrete within these time limits, batching of cement and a portion of the mixing water shall be delayed until the truck mixer is at or near the construction site.

3.2.3 Cold-Weather Placing. When the concrete is likely to be subjected to freezing temperatures before the expiration of the curing period, the concrete shall not be placed without a procedure approved in accordance with paragraph 1.4.2 (6). The ambient temperature of the space adjacent to the concrete placement and surfaces to receive concrete shall have been maintained at a temperature of not less than 40°F for 8 hours immediately prior to placement. The placing temperature of the concrete shall be between 55 and 75 degrees F. Heating of the mixing water or aggregates will be required to regulate the concrete-placing temperatures. Materials entering the mixer shall be free from ice, snow, or frozen lumps. Salt, chemicals, or other materials shall not be mixed with the concrete to prevent freezing.

3.2.4 Hot Weather Placing. Concrete shall be properly placed and finished with approved procedures in accordance with paragraph 1.4.2 (7). The concrete placing temperature shall not exceed 85 degrees Fahrenheit. Cooling of the mixing water and/or aggregates will be required to obtain an adequate placing temperature. Reinforcement shall be cooled prior to concrete placement

when steel temperatures are greater than 120 degrees Fahrenheit. Conveying and placing equipment shall be cooled if necessary to maintain proper concrete placing temperature.

3.2.5 Consolidation. Immediately after placement, the concrete shall be consolidated by internal vibrating equipment. Vibrators shall not be used to transport concrete within the forms. Hand spading may be required if necessary with internal vibrating along formed surfaces. The vibrator shall be inserted vertically at uniform spacing over the entire area of placement. The distance between insertions shall be approximately 1-1/2 times the radius of action of the vibrator. It shall be held stationary until the concrete is consolidated and then withdrawn slowly.

### 3.3 FINISHING.

3.3.1 General. Defective concrete, voids left by the removal of tie rods, ridges and local bulging on all concrete surfaces permanently exposed to view or exposed to water on the finished structure, shall be repaired immediately after the removal of forms unless otherwise authorized or directed. Voids left by the removal of the tie rods shall be reamed and completely filled with dry-patching mortar. Defective concrete shall be repaired by cutting out the unsatisfactory material and placing new concrete which shall be secured with keys, dovetails or anchors. Excessive rubbing of formed surfaces will not be permitted. Slight honeycomb and minor defects shall be patched with cement mortar made with 1 part cement and 2 parts fine aggregate. Exposed surfaces shall be given the following finish, as specified or as indicated.

#### 3.3.2 Unformed Surfaces.

3.3.2.1 Float Finish. Surfaces shall be screeded and darbied or bullfloated to bring the surface to the required finish level with no coarse aggregate visible. No water, cement, or mortar shall be added to the surface during the finishing operation. The concrete, while still green but sufficiently hardened to bear a person's weight without deep imprint, shall be floated to a true and even plane. Hand floats shall be made of magnesium or aluminum.

3.3.2.2 Wire Comb Finish. A wire comb finish shall be applied. The concrete surface shall be finished with a float finish. The floated surface shall be wire combed in a direction transverse to that of the main traffic. The finished combed surface shall be grooved 3/4 inch deep and 3 inches spaces between each groove.

### 3.4 CURING AND PROTECTION.

3.4.1 General. All concrete shall be cured by an approved method for a period of 7 days. Immediately after placement, concrete shall be protected from premature drying, freezing, extremes in temperatures, rapid temperature change, and mechanical injury. All materials and equipment needed for adequate curing and protection shall be available and at the placement site prior to the start of concrete placement. Concrete shall be protected from the damaging effects of rain for 12 hours and from flowing water for 7 days. No fire or excessive heat shall be permitted near or in direct contact with concrete at any time.

3.4.2 Moist Curing. Concrete moist-cured shall be maintained continuously (not periodically) wet for the entire curing period. If water or curing materials stain or discolor concrete surfaces that are to be permanently exposed, they shall be cleaned as required. Where wooden form sheathing is left in place during curing, the sheathing shall be kept wet at all times. Horizontal surfaces may be moist cured by ponding, by covering

with a minimum uniform thickness of 2 inches of continuously saturated sand, or by covering with saturated nonstaining burlap or cotton mats.

3.4.3 Membrane Curing. Concrete may be cured with an approved curing compound in lieu of moist curing. A nonpigmented-type curing compound, containing a fugitive dye, conforming to ASTM C 309 with the reflective requirements waived shall be used on surfaces that will be exposed to view when the project is completed.

3.4.3.1 Application. The curing compound shall be applied to formed surfaces immediately after the forms are removed. The surfaces shall be thoroughly moistened with water, and the curing compound applied as soon as free water disappears. The curing compound shall be applied to unformed surfaces as soon as free water has disappeared. The curing compound shall be applied in a two-coat continuous operation by approved motorized power-spraying equipment operating at a minimum pressure of 75 pounds per square inch, at a uniform coverage of not more than 400 square feet per gallon for each coat, and the second coat shall be applied perpendicular to the first coat. Concrete surfaces that have been subjected to rainfall within 3 hours after curing compound has been applied shall be resprayed by the method and at the coverage herein specified. All concrete surfaces on which the curing compound has been applied shall be adequately protected for the duration of the entire curing period.

3.4.4 Cold Weather. When the daily outdoor low temperature is less than 32 degrees F, the temperature of the concrete shall be maintained above 40 degrees F for the curing period. In addition, during the period of protection removal, the air temperature adjacent to the concrete surfaces shall be controlled so that concrete near the surface will not be subjected to a temperature differential of more than 25 degrees F.

### 3.5 JOINTS.

3.5.1 General. All joints in the concrete shall conform to the locations, designs, and details shown on the drawings, or as specified in this section of these specifications. The required materials shall be furnished and placed by the Contractor. Sufficient fastenings shall be used to ensure joint assemblies and materials remaining in position during the entire period of concrete placing, striking off, vibrating and finishing.

3.5.2 Expansion Joints. Provide premolded joint filler conforming to ASTM D 1751, for expansion joints. Extend joint fillers full width and depth of joint, and not less than 1/2-inch or more than 1-inch below finished surface for joint sealer. Joint sealer shall conform to ASTM C 920, Type S or M, Grade P, Class 25.

3.5.3 Contraction Joints. Contraction joints shall be constructed by cutting the concrete with a saw after concrete has set. Sawed joints shall be of the dimensions indicated on the drawings. Joint sawing shall be early enough to prevent uncontrolled cracking in the slab, but late enough that this can be accomplished without appreciable spalling. Concrete-sawing machines shall be adequate in number and power, and with sufficient replacement blades to complete the sawing at the required rate. Joints shall be cut to true alignment and shall be cut in sequence of concrete placement. Sludge and cutting debris shall be removed. Joint sealer shall conform to ASTM C 920, Type S or M, Grade P, Class 25.

3.5.4 Construction Joints. The locations of construction joints are indicated on the drawings. Joint sealer shall conform to ASTM C 920, Type S or



M, Grade P, Class 25.

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## SECTION 09900 - PAINTING

## PART 1 - GENERAL

1.1. SCOPE. The work of this section consists of furnishing all plant, labor, equipment, materials, and performing all operations required for the painting as herein specified.

1.1.1 General. The term "paint", as used herein, includes emulsions, enamels, paints, stains, varnishes, sealers, cement-emulsion filler, and other coatings, whether used as prime, intermediate, or finish coats. Extent of painting is indicated in the Paint Schedule, located at the end of this section. Do not paint factory-finished items, concealed surfaces, metal surfaces of anodized aluminum, stainless steel, or any moving parts of operating units. All painting operations shall conform to applicable safety criteria for the material used and EM 385-1-1.

## 1.2. QUALITY CONTROL.

1.2.1 General. The Contractor shall establish and maintain quality control for all operations to assure compliance with contract requirements and maintain records of its quality control for all construction operations, including, but not limited to, the following:

- (1) Surface preparation
- (2) Application and touch up.

1.2.2 Reporting. A copy of these records and tests, as well as corrective action taken shall be furnished to the Government daily.

1.3. APPLICABLE PUBLICATIONS. The following publications of the issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto:

1.3.1 American Society for Testing and Materials (ASTM).

A 780-93            Repair of Damaged and Uncoated Areas of Hot-Dip  
                         Galvanized Coatings

B 117-94            Operating Salt Spray (Fog) Testing Apparatus

1.3.2 U.S. Army Corps of Engineers.

EM 385-1-1        Safety and Health Requirements Manual

1.3.3 Federal Specifications (FS).

TT-E-489J        Enamel, Alkyd, Gloss, Low VOC Content

TT-P-57           Galvite

## 1.4 SUBMITTALS.

1.4.1 Product Data. Manufacturer's technical information including paint label analysis and application instructions for each material proposed for use including primers and finish coats.

1.4.2 Manufacturer's color chips for all finish coat applications proposed.

## PART 2 - PRODUCTS

2.1. MATERIALS. Paints shall be in sealed containers that plainly show the designated name, formula or specification number, batch number, color, quantity involved, date of manufacture, manufacturer's formulation number, manufacturer's directions, and name of manufacturer, all of which shall be plainly legible at the time of use. Pigmented paints shall be furnished in containers not larger than 5 gallons. Materials shall conform to the specifications shown in the painting schedule herein and to the requirements hereinafter specified. Contractor inspection responsibility shall be as specified in 09900-4. When the required quantity of a material of a particular color is 25 gallons or less, a proprietary brand of material similar in intended usage and color to that specified may be proposed, and the responsibility of the Contractor for inspection, as specified above, may be waived.

2.1.1 Paints and Stains. Paints and stains shall conform to the requirements indicated in the paint schedule, or equal products approved in writing by the Contracting Officer. Stains shall have a minimum of 50 percent linseed oil content.

2.1.4 Galvanized Surface Primer. Primers for galvanized surfaces shall conform to ASTM A 780.

2.2 PAINTING SCHEDULE. Paint all gates and posts for gates. All surfaces shall receive two finish coats unless additional coats are required to provide complete coverage and hiding of undercoats.

2.2.1 Colors and Tints. Colors and tints shall be selected by the Contracting Officer from manufacturer's color charts submitted by the Contractor. Undercoats shall vary slightly from the color of the next coat.

Color	Surface to be Painted	1st Coat	Paint to be Applied 2nd Coat	3rd Coat
	Ext'r Metal Posts, Gates (Galv.)	Galvite FS TT-P-57	Alkyd FS TT-E-489	Alkyd FS TT-E-489

## PART 3 - EXECUTION

### 3.1 CLEANING, PREPARATION, AND PRETREATMENT OF SURFACES.

3.1.1 General. Hardware, hardware accessories, plates, and similar items in contact with painted surfaces and not to be painted shall be removed, masked, or otherwise protected prior to surface preparation and painting operations. Surfaces to be painted shall be clean before applying paint or surface treatments. Surfaces not to be painted shall be in a new condition or shall be wire-brushed and touched up to remove all evidence of rust, corrosion, or abrasion. Oil and grease shall be removed with clean cloths and cleaning solvents prior to mechanical cleaning. Cleaning solvents shall be of low toxicity and shall have a flashpoint in excess of 100 degrees F. Cleaning and painting shall be so programmed that dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.

3.1.2 Ferrous Surfaces. Ferrous surfaces that have not been shop coated shall be solvent-cleaned to remove oil and grease. Surfaces that contain loose rust, loose mill scale, and other foreign substances shall be mechanically cleaned by power wire brushing or sandblasting. Minor amounts of residual rust, that cannot be removed except by thorough blastcleaning, and tight mill scale that cannot be removed by applying a sharp knife to any edge, will be allowed to remain. After cleaning, one coat of ferrousmetal primer shall be applied to ferrous surfaces to receive paint. The semitransparent film applied to some pipes and tubing at the mill is not to be considered as a shop coat, but shall be overcoated with the specified ferrous metal primer prior to application of finish coats. Shop-coated ferrous surfaces shall be stored out of contact with the ground in such manner and location as will minimize the formation of water-holding pockets, soiling, contamination and deterioration of the paint film. Such metal work shall be protected from corrosion before and after installation by treating corroded areas immediately upon detection. Abraded or corroded spots on shopcoated surfaces shall be wire-brushed and touched up with material similar to the shop coat.

3.1.3 Galvanized Surfaces. Galvanized surfaces to be painted shall be solvent-cleaned and painted with zinc dust primer and two finish coats. Galvanized surfaces not to be painted shall be solventcleaned.

### 3.2 PAINT APPLICATION.

3.2.1 General. The finished surfaces shall be free from runs, drops, ridges, waves, laps, brush marks, and variations in color, texture, and finish. The hiding shall be complete, and each coat shall be so applied as to produce film of uniform thickness. Special attention shall be given to insure that all surfaces including edges, corners, crevices, welds, and rivets receive a film thickness equivalent to that of adjacent painted surfaces. Respirators shall be worn by persons engaged or assisting in spray painting. Adjacent areas and installations shall be protected by the use of drop cloths, or other approved precautionary measures shall be taken. All paints shall be applied in strict accordance with the printed instructions of the manufacturer.

3.2.2 Coating Progress. Sufficient time shall elapse between successive coats to permit proper drying. This period shall be modified as necessary to suit adverse weather conditions. Oil base or oleoresinous solvent-type paints shall be considered dry for recoating when the paint feels firm, does not deform or feel sticky under moderate pressure of the thumb, and the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

3.2.3 Storage, Mixing, and Thinning. At time of application, paint shall show no signs of hard settling, excessive skinning, livering, or other deterioration. Emulsion paints shall be protected from exposure to cold weather by storing in shelters so as to prevent freezing of the paint. Paint shall be thoroughly stirred, strained, and kept at a uniform consistency during application. Paints of different manufacturers shall not be mixed together. Where necessary to suit conditions of surface, temperature, weather, and method of application, packaged paint other than cementemulsion filler may be thinned immediately prior to application in accordance with the manufacturer's directions, but not in excess of 1 pint of suitable thinner per gallon. The use of thinner for any reason shall not relieve the Contractor from obtaining complete hiding.

3.2.4 Atmospheric Conditions. Paints other than water-thinned coatings shall be applied only to surfaces that are completely free of surface moisture

as determined by sight or touch. In no case shall paint be applied to surfaces upon which there is visible frost or ice. While painting is being done, the temperature of the surfaces to be painted and of the atmosphere in contact therewith shall be at or above 50 degrees F. for waterthinned coatings and 45 degrees F. for other coatings. During periods of inclement weather, painting may be continued by inclosing the surfaces with temporary shelters and applying artificial heat, provided the temperature requirements prescribed above are maintained. Unvented combustion type heaters will not be permitted.

3.2.5 Time Between Surface Preparation and Painting Surfaces that have been cleaned, pretreated and/or otherwise prepared for painting shall be given a coat of the specified first-coat material as soon as practicable after such preparation has been completed, but in any event prior to any deterioration of the prepared surface.

3.2.6 Method of Paint Application.

3.2.6.1 Exterior Surfaces.

(1) Metal. First coats shall be applied by brush, except that where the item has been shop primed or field primed, the first coat may be applied by brush, roller, or spray. Subsequent coats may be applied by brush, roller, or spray.

(2) All other Surfaces. Except for shop-primed surfaces, first coats shall be applied by brush or spray, and subsequent coats may be applied by brush, roller, or spray.

3.3 CLEANING UP. Cloths and cotton waste that might constitute a fire hazard shall be placed in closed metal containers or destroyed at the end of each day. Upon completion of the work, staging, scaffolding and containers shall be removed from the site or destroyed in an approved manner. Paint spots, oil, or stains upon adjacent surfaces shall be removed and the entire job left clean and acceptable.

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15120.12

SECTION 15120  
VALVES AND GAGES

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2.1	GALVANIZED PIPE
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2.3	IRON CASTINGS
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2.5	JOINT SEALER
2.6	PRECAST CONCRETE MANHOLE SECTIONS
2.7	FITTINGS
3.1	COMBINATION AIR RELEASE/AIR VACUUM VALVES AND VALVE CHAMBERS

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SECTION 15120  
VALVES AND GAGES

## PART 1 GENERAL

1.1 SCOPE. The work covered by this section of the specifications consists of furnishing all plants, labor, materials, and equipment, and performing all operations necessary for the installation of the air release/air vacuum valve shown on the drawings and specified herein.

## 1.2 QUALITY CONTROL.

1.2.1 General. The Contractor shall establish and maintain quality control for all operations to assure compliance with contract requirements and maintain records of its quality control for all construction operations, including but not limited to the following:

- (1) Materials.
- (2) Installation.
- (3) Tests.

1.2.2 Reporting. A copy of these records and tests, as well as the records corrective action taken, shall be furnished to the Government daily.

1.3 APPLICABLE PUBLICATIONS. The following publications of issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto:

1.3.2 American Society for Testing and Materials (ASTM).

A 47-90	Ferritic Malleable Iron Castings
A 48-94	Gray Iron Castings
A 53-96	Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless
C 76-90	Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
C 443A-85 (R1990)	Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets
C 478-93 (Rev B)	Precast Reinforced Concrete Manhole Sections

1.3.3 American National Standards Institute (ANSI).

B-16.3-92	Malleable Iron Threaded Fittings
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1.3.4 American Water Works Association (AWWA).

C 509-87	Resilient-Seated Gate Valves for Water and Sewerage Systems
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1.4 GENERAL. The valves specified herein and shown on the drawings consists primarily of installation of combination sewage air release/air vacuum valves, and valve chambers along the pressure sewer line. Work covered by this section will not be accepted until backfilling connected with the work has been completed satisfactorily, and all corrections of defective items of

work have been completed satisfactorily at no additional cost to the Government.

1.5 SUBMITTALS. Government approval is required for all submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01300 SUBMITTAL PROCEDURES:

1.5.1 Data. Materials and Equipment; GA. Submit manufacturer's descriptive data for all materials and equipment specified herein.

## PART 2 - PRODUCTS

2.1 GALVANIZED PIPE. ASTM A53.

2.2 CONCRETE PIPE. ASTM C 76, Class III, Wall B.

2.3 IRON CASTINGS. ASTM A 48.

2.4 VALVES. Gate valves shall conform to the requirements of AWWA C 509. Valves shall be the product of a manufacturer regularly engaged in their production and shall be suitable for the use intended.

2.5 JOINT SEALER. Joint sealer for the particular type of pipe shall be an approved mastic, rubber gasket, or combination of these types.

2.5.1 Mastic Joints. Mastic joints between precast rings shall be full-bedded in jointing compound and shall be smoothed to a uniform surface on both the interior and exterior of the manhole. The mastic shall be non-hardening butyl rubber sealant.

2.5.2 Rubber Joints. Installation of rubber gasket joints between precast rings shall be in accordance with the manufacturer's recommendations. Rubber gasket joints shall conform to ASTM C 443.

2.6 PRECAST CONCRETE MANHOLE SECTIONS. Precast concrete manhole sections shall conform to ASTM C 478.

2.7 FITTINGS. Malleable iron 150 Lb standard; dimensions ANSI B 16.3, material ASTM A 47.

## PART 3 EXECUTION

3.1 COMBINATION AIR RELEASE/AIR VACUUM VALVES AND VALVE CHAMBERS.

3.1.1 General. The combination air release/air vacuum valve shall be installed on the pressure sewerline at the high point in the vicinity shown on the drawings and specified herein. The exact location of the valve shall be determined in the field based on the valve chamber dimensions indicated on the drawings, and shall be approved by the Contracting Officer.

3.1.2 Valve Chamber. Concrete valve chamber for the combination air release/air vacuum valve shall be constructed as shown on the drawings. The lid shall be a vented type. In areas which are mowed on a regular basis, the chamber shall be flush with the ground. In areas which will remain wooded the chamber shall be raised as indicated on the drawings.

3.1.3 Combination Air Release/Air Vacuum Valve The combination air release/air vacuum valve shall combine the features of both the air vacuum valve and the air release valve. The air release valve shall allow air to exit the line during normal pump operation and the air vacuum valve allows air

to enter or exit during filling of the pipe line or during gravity drainage of the descending portion of the pressure sewer line. The air release valve shall have a 1/4-inch orifice which is based on a fill rate of 10 cfm and a working pressure of approximately 150 psi. The air vacuum valve shall have a 1-inch orifice which is based on a gravity drainage rate of 65 cfm and a pressure differential across the valve of 5 psi.

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SECTION 16400  
ELECTRICAL WORK AND EQUIPMENT

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SECTION 16400  
ELECTRICAL WORK AND EQUIPMENT

## PART 1 - GENERAL

1.1 SCOPE. The work covered by this section consists of furnishing all plant, labor, equipment, supplies, and materials and performing all operations in connection with the electrical system for the structure as specified herein and shown on the drawings.

## 1.2 QUALITY CONTROL.

1.2.1 General. The Contractor shall establish and maintain quality control for all operations to assure compliance with the contract requirements and maintain records of its quality control for all construction operations, including but not limited to the following:

- (1) Assembly and workmanship
- (2) Installation
- (3) Testing.

1.2.2 Reporting. A copy of these records and tests, as well as the records of corrective action taken, shall be furnished to the Government daily.

1.3 REFERENCES. The following publications of the issues listed below but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto.

1.3.1 American National Standards Institute (ANSI).

ANSI 70-91	Method of Testing for Rating the Performance of Air Outlets and Inlets
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1.3.2 Institute of Electrical and Electronics Engineers, Inc. (IEEE)

IEEE 81-83	Guide for Measuring Earth Resistivity, Ground Impedance and Earth Surface Potentials of a Ground System
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1.3.3 National Electrical Manufacturers Association (NEMA).

AB 1-86	Molded Case Circuit Breakers and Molded Case Switches
PB 1-90	Panelboards
ICS 2-93	Industrial Control Devices, Controllers and Assemblies
MG-1-93	Motors and Generators
WC 3-81 (R 1994)	Rubber-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy
WC 7-93	Cross-Linked Thermosetting Polyethylene Insulated Wire and Cable for the Transmission

and Distribution of Electrical Energy

1.3.4 National Fire Protection Association (NFPA).

70-96                      National Electrical Code

1.3.5 Underwriters' Laboratories, Inc. (UL).

UL 6-93              Rigid Metal Conduit

UL 508-93      Industrial Control Equipment

1.3.6 American Society for Testing and Materials (ASTM)

C2-1993-1996              National Electrical Safety Code

C80.1-90              Rigid Steel Conduit, Zinc Coated

1.4 GENERAL.

1.4.1 Rules. The installation shall conform to the applicable rules of the NFPA Code No. 70.

1.4.2 Coordination. The contract drawings indicate the extent and the general location and arrangement of equipment, conduit, and wiring. The Contractor shall study details so that the equipment will be properly located and readily accessible. If any conflicts occur necessitating departures from the contract drawings, details of departures and reasons therefor shall be submitted as soon as practicable for written approval of the Contracting Officer. When electrical equipment approved for installation materially differs from that specified herein, the Contractor shall make the necessary adjustments to the wiring, disconnect devices, and branch circuit protection to accommodate the equipment actually installed.

1.4.3 Standard Products. Materials and equipment submitted for approval shall be the standard catalogued products of concerns regularly engaged in the manufacture of the products and shall be the latest standard design that conforms to the specification requirements.

1.4.4 Workmanship. All materials and equipment shall be installed in accordance with recommendations of the manufacturer as approved by the Contracting Officer to conform with the contract documents. The installation shall be accomplished by workmen skilled in this type of work.

1.5 SUBMITTALS. Government approval is required for all submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01300 SUBMITTAL PROCEDURES:

1.5.1 Data. Materials and Equipment; GA. As soon as practicable and before starting installation of any materials or equipment, the Contractor shall submit a complete list of materials and equipment proposed for installation. This list shall include manufacturers' names and material or equipment identification such as styles, types, or catalog numbers, to permit ready and complete identification.

1.5.2 Drawings. Equipment; GA. Shop drawings shall be submitted to the Contracting Officer for approval, before installation of any material or

equipment, and shall include but not be limited to the following: cables, conduit, sealing fittings, receptacles, enclosures.

1.5.3 Statements. Materials and Equipment; GA. Approval of materials will be based on the manufacturer's published data. The label or listing of the Underwriters' Laboratories, Inc., will be accepted as evidence that the materials or equipment conform to the applicable standards of that agency. In lieu of this listing, the Contractor shall submit a statement from a nationally recognized, adequately equipped testing agency indicating that the items have been tested in accordance with required procedures and that the materials and equipment comply with all contract requirements. A manufacturer's statement indicating complete compliance with the applicable Federal specification or the ASTM, NEMA, or other commercial standard will be acceptable.

1.5.4 Reports. Ground Resistance Tests; GA. Submit the ground resistance test results.

1.6 WARRANTIES. Commercial warranties for equipment furnished under this section shall be furnished as specified in SPECIAL CLAUSE 00800-28.

## PART 2 - PRODUCTS

2.1 CONDUCTORS. The conductors shall be single-conductor, insulated copper wire with 600 volts rated insulation. The conductors shall be installed from termination to termination with no splices.

2.1.1 Conductor Sizes. Conductor sizes shall be not less than the sizes indicated. Branch circuit conductors shall be not smaller than No. 12 American Wire Gauge. Conductors of No. 10 AWG and smaller shall be solid and conductors of No. 8 AWG and larger shall be stranded.

2.1.2 Conductor Insulation. Insulation of the conductors shall be the moisture-resistant type, having a cross-linked polyethylene (XLPE) insulation rated 0 to 600 volts conforming to the requirements of NEMA Standard WC 7. In addition to the insulated conductors, the cable shall have an approved size uninsulated conductor for grounding purposes only.

2.1.3 Conductor Identification. Conductor identification of branch circuits shall be by color-coded insulated conductors, plastic-coated, self-sticking printed markers, permanently attached, stamped, metal foil markers, or equivalent means. Conductor identification shall be provided within each enclosure where a tap, splice, or termination is made.

2.2 MOTOR DISCONNECTION MEANS. A circuit breaker shall be provided for each motor. Circuit breakers shall be sized based on manufacturer's recommendation.

## 2.3 RECEPTACLES.

2.3.1 Ground Fault Interrupter Receptacle. The receptacle shall be the duplex, Class A, rated 20 amperes, 120-volts ac, 60 Hz. The receptacles shall conform to the NEC and UL listings 498 and 943 Class A. The receptacles shall be installed in the Pump Motor Control Panel.

2.4 CONTROL PANEL ENCLOSURE. Control panel enclosure shall be NEMA 4X ( as specified in paragraph 2.6 ), and shall be provided with a thermostatic controlled strip heater rated as shown on the drawing. Thermostat shall have an externally coiled sensing element but no thermometer and shall be

adjustable over a range of 20 to 90 degrees F with 3 degrees differential. All devices shall be mounted inside the enclosure, except the high level alarm strobe light and horn. The strobe light shall be mounted on top of the pump motor control panel, and the horn shall be mounted on the side of this enclosure. The enclosure shall be furnished with a padlock. The padlock shall be supplied with one key and shall be master-keyed. The Contracting Officer will furnish the Contractor with the Master Key Code Number.

## 2.5 MOTORS.

2.5.1 General. Motors specified in this and other sections shall conform to the requirements of NEMA MG 1 and shall be of sufficient size for the duty to be performed. Motors shall not exceed the full-rated load when the driven equipment is operating at specified capacity under the most severe conditions likely to be encountered. The horsepower ratings indicated on electrical plans are for guidance only and do not limit the equipment size.

2.5.2 Motor Control. Motor controls shall conform to the requirements of NEMA Standard ICS and Underwriters Laboratories, Inc., Standard UL 508. Each motor of 1/12 horsepower or larger shall be provided with thermal-overload protection. The overload protection device shall be provided integral with the controller. Unless otherwise specified, the protective device shall be of the manually reset type. Single-pole tumbler switches specifically designed for alternating-current operation only may be used as manual controllers for single-phase motors having a current rating not in excess of 80 percent of the switch rating. Automatic control devices such as thermostats, or pressure switches may control the starting and stopping of motors directly, provided the devices used are designed for that purpose and have an adequate horsepower rating. When automatic control device does not have a rating, a magnetic starter shall be used with the automatic control device actuating the pilot control circuit.

## 2.6 LIFT STATION WET WELL.

2.6.1 General. The control panel enclosure shall consist of a NEMA 4X enclosure, made of high impact strength fiberglass reinforced polyester material, with factory installed hubs for conduit entrances. Locknuts and gaskets shall be furnished to ensure a watertight seal. The enclosure shall contain the incoming power, main circuit breaker, and two combination circuit breaker type motor starters for the duplex pump motor control. The enclosure shall be complete with internal control switches, pilot lights, "Start" - "Stop" pushbuttons, and elapsed time meters. The enclosure shall be provided with means for padlocking, and shall be mounted and connected as shown on the drawing. The electrical equipment and wiring furnished and installed as part of the lift station wet well shall conform to the requirements of this section and Section 2710.

2.6.2 High Level Alarm. The Contractor shall install at the lift station wet well a high level alarm system. The alarm system shall have a self contained rechargeable power supply. The power supply shall be protected against shorts, and have lightning and brownout protection. The transformer shall be current limiting and of rugged design. The transformer shall have an input voltage of 120 volts, 60 Hz., and an output of 16 volts dc. The red strobe light and horn shall be rated 12 volts dc, and a switch shall be provided to silence the horn.

2.6.3 Sealing Fittings. Conduit sealing fittings shall be used in raceways between control panel and wet well. The sealing fittings shall have a minimum turning radius, large openings with threaded closures, integral

bushings in conduit hubs to protect the conductor insulation from damage, and taper-tapped hubs to ensure ground continuity. The fittings shall be installed as shown on the drawings.

### PART 3 - EXECUTION

#### 3.1 GROUNDING.

3.1.1 General. Except where specifically indicated otherwise, all exposed non-current-carrying metallic parts of electrical equipment, raceway systems, and neutral conductor of the wiring system shall be grounded. The ground connection shall be made to the neutral conductor at the panel. The ground connection shall be made to a driven rod with bare copper wire as indicated on the drawings. The ground rod shall be of copper-clad steel not less than 3/4 inch in diameter, 10 feet long, driven full length into the earth, so top of the rod is 12 inches below grade, and connection of ground wire to ground rod made 18 inches below grade utilizing the process of molded exothermic welds.

3.1.2 Maximum Resistance. The maximum resistance of a driven ground shall not exceed 25 ohms measured by the drop of potential method under normally dry conditions. If this resistance cannot be obtained with a single 10 foot rod, additional sections may be coupled and driven with the first rod or an additional 10 foot rod shall be installed at least 10 feet from the first rod. If the resultant resistance exceeds 25 ohms measured not less than 48 hours after rainfall, the Contracting Officer shall be notified immediately. The measurement shall conform to IEEE 81.

#### 3.2 WIRING METHODS.

3.2.1 General. Wiring shall consist of insulated conductors installed in rigid hot-dipped zinc-coated steel conduit. Underground services shall consist of direct burial cables where not located under asphaltic or concrete surfaces.

3.2.2 Conduit System. Conduit system shall be installed in accordance with Article 345, 346 & 348 of the National Electrical Code. Raceways shall be supported and secured at intervals of not more than 5 feet. Hangers, supports or fastenings shall be provided at each elbow and at the end of every straight run terminating at a box or cabinet. Exposed raceways shall have runs installed parallel or perpendicular to walls, structural members, or intersections of vertical planes and ceilings. Field-made bends and offsets shall be made with an approved hickey or conduit-bending machine. Changes in directions of runs shall be made with symmetrical bends or cast metal fittings. Crushed or deformed raceways shall not be installed. Joints shall be made so that the ends of the conduit butt together in the center of the couplings. No running thread couplings shall be used on runs of conduit. At joints and terminals, the ends of conduit shall be cut square. Cut ends shall be reamed to remove burrs and sharp edges. Threads cut on conduit in the field shall have the same effective length and the same thread dimensions and taper as required for factory-cut conduit threads. Trapped raceways in damp and wet locations shall be avoided where possible. Care shall be taken to prevent the lodgment of concrete, dirt, or trash in raceways, boxes, fittings, and equipment during the course of construction. Clogged raceways shall be entirely freed of obstructions or shall be replaced. The conduits shall be fastened to all sheet metal boxes and panels with two locknuts where required by the National Electrical Code, where insulating bushings are used, and where bushings cannot be brought into firm contact with the box; otherwise, a single locknut and bushing will be acceptable. Bushings shall be installed on the ends of all conduits and shall be of the insulating type where required by the

National Electrical Code. Fittings installed in wet locations or exposed to the weather shall be rain-tight. Wooden plugs inserted in concrete or masonry are not acceptable as a base for raceway fastenings, nor shall raceways or pipe straps be welded to steel structures. Raceways shall be secured by galvanized pipe straps or shall be supported by galvanized wall brackets, strap hangers, or ceiling trapeze, fastened by toggle bolts on hollow masonry units, expansion bolts on concrete or brick, and machine screws or welded threaded studs on steel work. In addition to the fastenings required for securing conduit runs to walls or structural members, galvanized conduit backing devices shall be furnished to eliminate or reduce conduit offsets at conduit fittings and to provide an air space between conduit and walls or structural members. Nail-type nylon anchors or threaded studs driven in by a powder charge and provided with lock washers and nuts are acceptable in lieu of expansion bolts or machine screws. All conduits entering the panel shall be furnished with grounding bushings and connected to the ground conductor within the cabinets.

3.2.3 Underground Conduit. Conduit size is based on type USE cable. Conduit shall be rigid steel and installed a minimum of 24 inches below grade. The bottom of the trench shall be smooth and free of stones and sharp objects. Where the bottom of the trench consists of materials other than sand or stone-free earth, a 4 inch layer of sand shall be laid on the bottom of the trench and compacted.

3.2.4 Installation of Direct Burial Cable. Top of cable shall be at least 24 inches below finished grade. The bottom of trench for direct burial cable shall be smooth and free of stones and sharp objects. A 4 inch layer of sand shall be laid on the bottom of the trench and compacted to the approximate density of the surrounding firm soil. The cables shall be unrolled in place along the side of or in the trench and carefully placed on the sand bottom. Pulling of the cables into the trench from a fixed reel position will not be permitted. The cable bend radius shall not be less than that recommended by the manufacturer. In no case shall cables be left under longitudinal tension. The first 4 inch layer of backfill shall be of sand. No splices in cables will be permitted.

3.2.5 Warning Tape. A continuous tape shall be installed approximately one foot below finished grade, directly above, and parallel to the buried cable. The tape shall have foil backing or other means to enable detection by a metal detector. The tape shall be of the type specifically manufactured for marking and locating underground utilities. The tape shall be bright red polyethylene film 6 inches wide by 4 mils thick with the following lettering repeated continuously along the tape in black letters approximately 1-1/4 inches high: top line - "CAUTION", bottom line - "ELECTRIC LINE BURIED BELOW".

### 3.3 EQUIPMENT CONNECTIONS

3.3.1 General. All wiring for the connection of motors and control equipment as indicated on the electrical drawings shall be furnished and installed under this section of the specifications. Except as otherwise specifically noted, automatic control wiring, and protective devices that are not included in this section of the specifications shall be furnished and installed under other sections of the specifications. Control wiring not shown on the electrical drawings shall be furnished under other sections of the specifications.

3.3.2 Flexible Connections. Short length flexible connections shall be provided for all motors and equipment subject to vibration or movement. The flexible metal conduit shall be covered with extruded vinyl tubing.

### 3.4 SERVICE.

3.4.1 Coordination. It shall be the responsibility of the Contractor to properly coordinate with the local utility, Clinton County Electric Cooperative, to provide temporary construction power for use by the Contractor. The Contractor shall pay all temporary construction power costs including hook-up, power, and dismantle and removal from the site.

3.4.2 Permanent Electric Service. The Contractor shall install a permanent 120/240 volt electric service for the new lift station in accordance with these specifications. Contractor shall coordinate with Clinton County Electric Cooperative and the Manager of the marina for connecting to existing service.

### 3.5 PARKING AREA LIGHTS.

3.5.1 General. Clinton County Electric Co-op shall be responsible for relocating any parking area lights and poles identified for relocation. Contractor shall be responsible for running new conductors, from existing power source, to relocated parking area lights. All work and material shall conform to the specifications herein. Contractor shall coordinate all work with Clinton County Electric Co-op and the Contracting Officer.

3.5.2 Electrical Disconnection. Contractor shall be responsible for disconnecting all electrical connections to parking area lights identified for relocation. Contractor shall ascertain that the electrical service has been disconnected before starting any work. All underground conduit and wiring shall be removed to 24 inches below grade. All conduit and wiring lower than 24 inches below grade shall be abandoned in place.

3.5.3 Electrical Connection. Contractor shall be responsible for all electrical connections at each relocated parking area light.

3.6 REPAIR OF EXISTING WORK The work shall be carefully laid out in advance. Cutting, channeling, chasing, or drilling of floors, walls, ceiling, partitions, or other surfaces where necessary for proper installation, support, or anchorage of the conduit, raceway, or other electrical work, shall be accomplished carefully. Any damage of building, piping, or equipment shall be repaired by skilled mechanics of the trades involved, at no additional cost to the Government.

3.7 PAINTING AND FINISHING. All items normally furnished with a complete factory finish, including panelboards, heaters, fans, motors, and motor controls, shall be furnished with a complete factory finish in accordance with the manufacturer's standard practice.

3.8 TESTS. Tests shall be made on all electrical equipment and systems to determine operational integrity. The Contractor shall correct, to the satisfaction of the Contracting Officer, and without expense to the Government, all defects found during the tests. The tests shall be performed in the presence of the Contracting Officer or an authorized representative. The Contractor shall furnish all instruments and personnel required for the tests, while the Government will furnish the electric power.

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